

2018 Alberta Technology Deal Flow Study

Final Report, February 2019





2018 Deal Flow Study CEO's Message

Entrepreneurship is part of Alberta's DNA, and this is an exciting time of growth for investors and technology companies.

Alberta Enterprise Corporation (AEC) is helping to build a more sustainable, diversified technology industry in Alberta, one where home-grown innovation is encouraged, and technology entrepreneurs have greater access to venture capital.

It was identified early on that while deal flow is an indicator of a thriving ecosystem, it is often difficult to track and poorly understood. AEC commissioned this study to build upon the 2009, 2012 and 2016 reports, to bridge this knowledge gap and to provide deeper insight into the technology deal flow landscape in Alberta.

We expanded the scope of the survey portion of the 2018 Study to uncover more insight into the changes to the Alberta tech ecosystem including who is participating, what type of companies they are building and what sources of capital they are tapping to raise their funding.

Alberta continues to be a great place for early stage investors to source deal flow in the pre-seed to Series A range. 60% of Alberta tech companies fall into this spectrum with 23% having \$1M or more of annual recurring revenue (ARR). The data tells us that equity financing has a critical impact upon the health of our tech ecosystem, with 73% of equity financed companies raising over \$1 million in their most recent round of financing, and 55% of those companies in the scaling phase

Interestingly, female participation in Alberta's tech sector has also seen impressive growth with the proportion of female tech founders reaching 30% (a 50% increase over 2016), compared to the national average of 13% in 2018.* Furthermore, 34% of technology companies incorporate artificial intelligence/machine learning in their product.

Thank you to all participants of this study whose support made this report possible. We hope that this report provides valuable learnings and helps your organization to continue to serve, support, or fund promising companies in Alberta's technology industries.

Kristina Williams

President & CEO, Alberta Enterprise Corporation

**(2017 Move the Dial Benchmark Report: https://docs.wixstatic.com/ugd/55c9d2_efb58fc4258b40978b5d2bc3a9d2a577.pdf).*

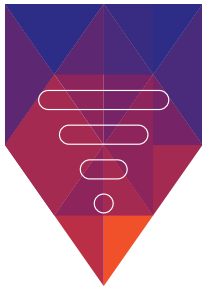


Table of Contents

Executive Summary	1
Background and Methodology	2
A Note on Interpreting Results.....	3

Alberta's Tech Sector

Technology Company Count	5
Change Since 2016.....	5
Regional Breakdown.....	6
Regional Breakdown Over Time	7
Industries	8
IT Verticals.....	9

The People Story

About the Founders.....	12
Characteristics of Founders	13
About the Employees.....	14

The Company Story

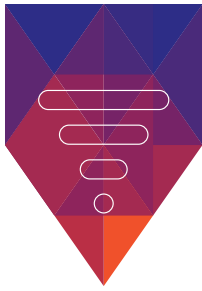
About the Companies	17
What They are Selling	19
What They are Selling – Vertical Focus	20
About the Products – Development Stage.....	21
Target Market – Customer Type.....	22
Target Market – Industry.....	23

The Capital Story

Current Revenues.....	26
Next Round of Fundraising	27
Total Funding Received to Date	28
Funding Stage.....	29
Most Recent Fundraising – Totals.....	30
Most Recent Fundraising – Sources	31
Most Recent Fundraising – Details	32

Appendices

Deal Flow Studies Over Time.....	34
Glossary of Terms.....	36
Industry Breakdown by Region	40
Overall Alberta Tech Sector.....	42
Company Data.....	44
Fundraising	48
The People.....	52



Executive Summary

The Alberta Tech Deal Flow Study is currently the most comprehensive view of the tech startups in Alberta. This is made possible by the many submissions and support from the tech companies, supporting organizations and investors who are actively involved in Alberta's tech sector. We expanded the scope of the survey phase of the 2018 Study to provide more in depth findings on the tech companies across verticals, stages, and other dimensions.

A total of 1,238 tech companies were identified as meeting the criteria for the study. This compares to 1,373 companies identified in 2016, and 927 identified in 2012.

Calgary has almost twice the number of tech companies compared to Edmonton (767 compared to 394). Software continues to be the leading sector with 40% of the tech deal flow, followed by energy & clean tech with 21% of the deal flow and life sciences at 13%. Companies developing products related to life science, are more concentrated in Edmonton than Calgary. SaaS and enterprise software, while important to both cities, appear to be more concentrated in Calgary with 54% of the SaaS companies in Alberta located there.

Female participation in Alberta's tech sector has seen impressive growth with the proportion of female tech founders reaching 30% (a 50% increase over 2016), compared to the national average of 13% in 2018.*

The survey results suggest that Alberta's technology sector is becoming more mature and established while the net growth in the number of tech startups appears to be slowing down. A larger proportion of companies are in the later stages of product development (i.e. launched, and traction/scaling) than was found in 2016 (63%, up 12 points from 51%). In terms of total revenue, the proportion of companies that have collected revenues between \$1 million to under \$5 million has increased (15%, up 2 points from 2016). However, there are a smaller proportion of companies in the pre-revenue phase (24%, down 16 points from 40%) and a smaller proportion of companies in the earlier stages of product development than in 2016 (32%, down 12 points from 44%).

With regards to funding sources, 75% of start-ups have fundraised from personal savings, 56% from government grants, 43% from angel investors, and 18% from venture capital investors.

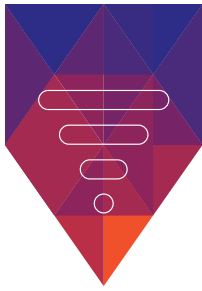
The static snapshot in time which the *2018 Alberta Tech Deal Flow Study* provides, can be augmented with more real time data found on the VCAA's (Venture Capital Association of Alberta) StartAlberta.com portal.

Thank you to the many organizations and individuals who supported this Study. We hope the findings continue to be informative and useful in supporting the growth of Alberta's technology sector.

Kenya Kondo

Director, Industry Development, Alberta Enterprise Corporation

*(2017 Move the Dial Benchmark Report: https://docs.wixstatic.com/ugd/55c9d2_efb58fc4258b40978b5d2bc3a9d2a577.pdf).



Background and Methodology

- The Deal Flow Study serves to inform Alberta Enterprise Corporation's (AEC) investment strategy in technology venture capital funds. The Study helps to inform the spectrum of technology companies by sector and stage across Alberta.
- In 2009, 2012 and 2016, AEC commissioned the Alberta Technology Deal Flow Study in order to provide insights into the technology deal flow landscape in Alberta.
- In 2018, AEC partnered with Vision Creative Inc., Trend Research, and Janet Brown Opinion Research to conduct similar research, with an expanded survey component, building on the 2016 survey portion of the Deal Flow Study.
- The 2018 Deal Flow Study was completed in two phases:

Phase One: Identification and validation of startups and companies in Alberta's tech sector. AEC compiled a list of technology companies from a wide variety of sources. Through a combination of email searches, and telephone calls, Trend Research validated each company on the list to ensure it met the following criteria:

- Headquartered in Alberta
- Active in 2018
- Not publicly traded
- Produced a technology-based product
- Does not include value added resellers, integrators, distributors, or resellers
- A total of 1,238 companies met this criteria. Initially, 1,195 companies were identified in the validation phase, and an additional 43 companies were identified during the online survey phase, and later added to the database.

	Companies identified in Validation Phase	Companies completing Online Survey [†]
Calgary Region	767	115
Edmonton Region	394	86
Other AB	77	7
Province	1,238	208

[†] Included in the validation phase

Phase Two: In-depth survey of Alberta's tech sector. An online questionnaire was created and promoted by AEC to Alberta's tech sector. The questionnaire asked about company characteristics, product development, target market, and fundraising. The survey was hosted by Trend Research and was open to participants from September 20 to October 31, 2018.

In total, 208 qualified companies completed the online survey.

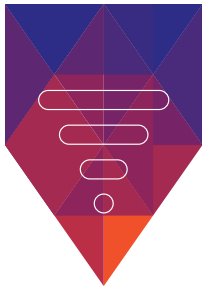
Validation Section vs. Survey Section

Phase 1: Validation

Throughout this report, results from the Validation Phase reference the data inputs, Alberta tech companies, which were surfaced through a combination of email searches and telephone calls. Alberta tech sector company information gathered was then vetted against specific criteria, with overall findings from this undertaking making up the Validation Phase.

Phase 2: In-Depth Survey

Throughout this report, results from the Survey Phase reference the data trends, providing an in-depth understanding of Alberta's tech sector, which surfaced during the online survey. Data trends surfaced speak to company characteristics, product development and financing, with overall deal flow findings making up the Survey Phase.



A Note on Interpreting Results

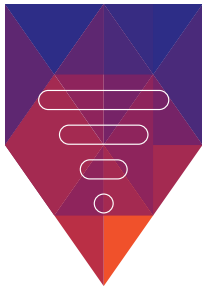
When interpreting these survey results, readers should keep the following in mind:

- The validation phase of the research was intended to be a census of all existing Alberta-based tech startups and companies which meet the Deal Flow Study's criteria (see page 2). Potential companies were drawn from various sources, including existing databases of tech companies. Qualified companies may have been missed in this phase of the research if those companies were operating in isolation from other tech companies, not appearing in any tech databases or not referred to by the participating ecosystem partners. This is referred to as coverage error.
- The survey phase was intended to be a representative subset of the universe of tech companies identified in the verification stage. However, it is possible that companies motivated to answer the survey may have different characteristics than those that did not participate. This is referred to as participation bias.
 - As an example, 62 per cent of companies identified in the verification phase of the research are based in Calgary. However, only 55 per cent of the companies that answered the survey are based in Calgary. This may suggest that companies in Edmonton were more likely to be aware of the survey, or more likely to want to participate.

	2018		2016	
	# validated	# in online survey	# validated	# in online survey
Calgary Region (n) % of total	767 62%	115 55%	847 62%	153 61%
Edmonton Region (n)% of total	394 32%	86 41%	460 34%	90 36%
Other AB (n) % of total	77 6%	7 3%	66 5%	9 4%
Province (n) % of total	1,238 100%	208 100%	1373 100%	252 100%



Alberta's Tech Sector



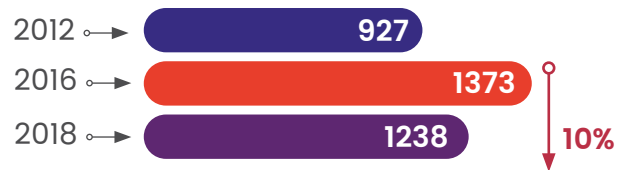
Technology Company Count

In 2018, a total of 1,238 companies were identified in phase one of the research as being:

- Headquartered in Alberta
- Active in 2018
- Not publicly traded
- Producing a technology-based product or service*

After a period of growth between 2012 and 2016, the overall technology ecosystem within Alberta appears to have retracted by 10 per cent over the past two years.

Technology Company Count



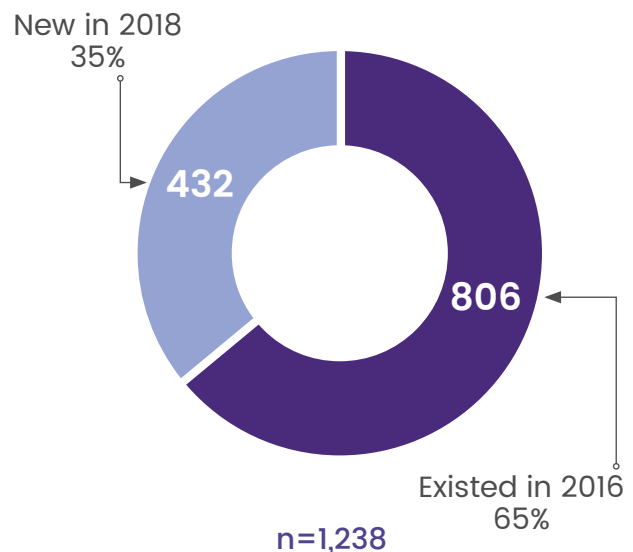
Change Since 2016

There are a number of reasons a company that existed in 2016 would no longer be counted as part of the 2018 Deal Flow Study, including that the company was acquired by another company, moved its headquarters out of Alberta, began trading publicly, or ceased operations and/or there are fewer new companies entering the Deal Flow funnel compared to 2016.

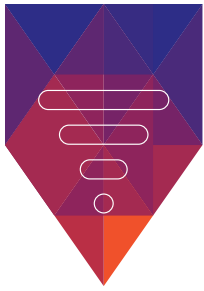
Companies that are new to the 2018 study are more likely than pre-existing companies to be:

- involved in the social platform vertical (51%)
- active in the clean tech (49%) and IT (38%) industries

Change Since 2016



* Products or services produced by qualified companies include software, hardware, equipment, devices, chemicals, pharmaceuticals, and any product offerings that required development and/or research and development. Companies that are strictly value-added resellers, integrators, or distributors were not included in the sample.

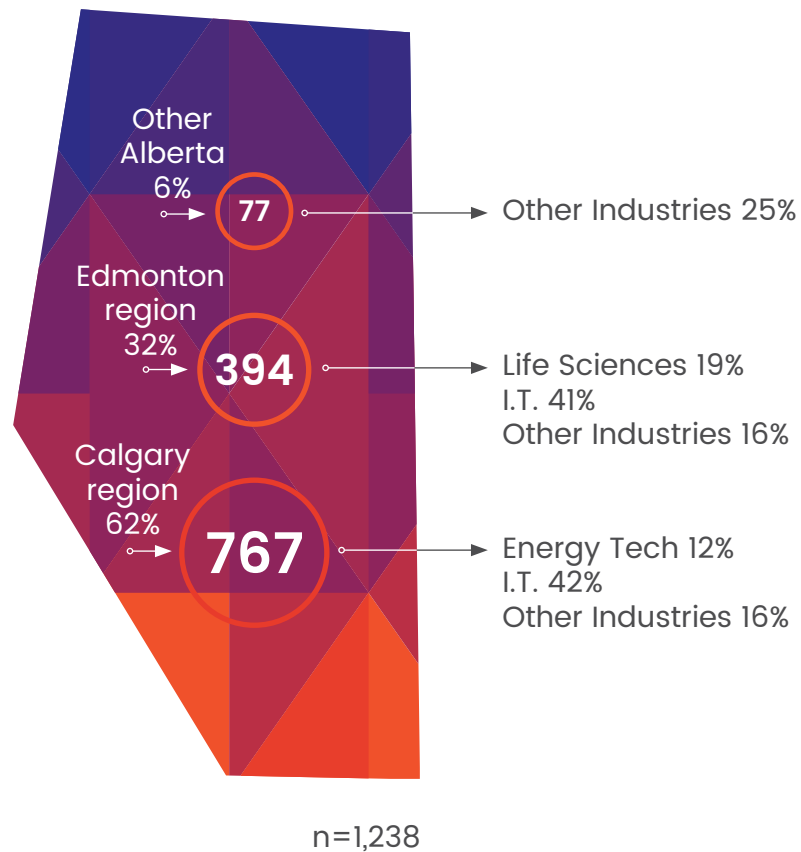


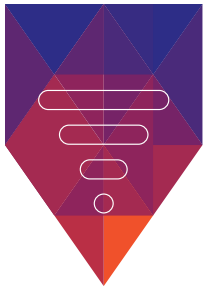
Regional Breakdown

Looking at the 1,238 existing companies, almost all technology startups (94%) are located in either the Calgary or Edmonton regions. The Calgary region is home to almost twice as many technology companies as the Edmonton region (62% versus 32%).

The breakdown of “dominant industries” across regions represents the industries with the highest prevalence of participation by startups in that geographical area.

Regional Breakdown and Dominant Industries*

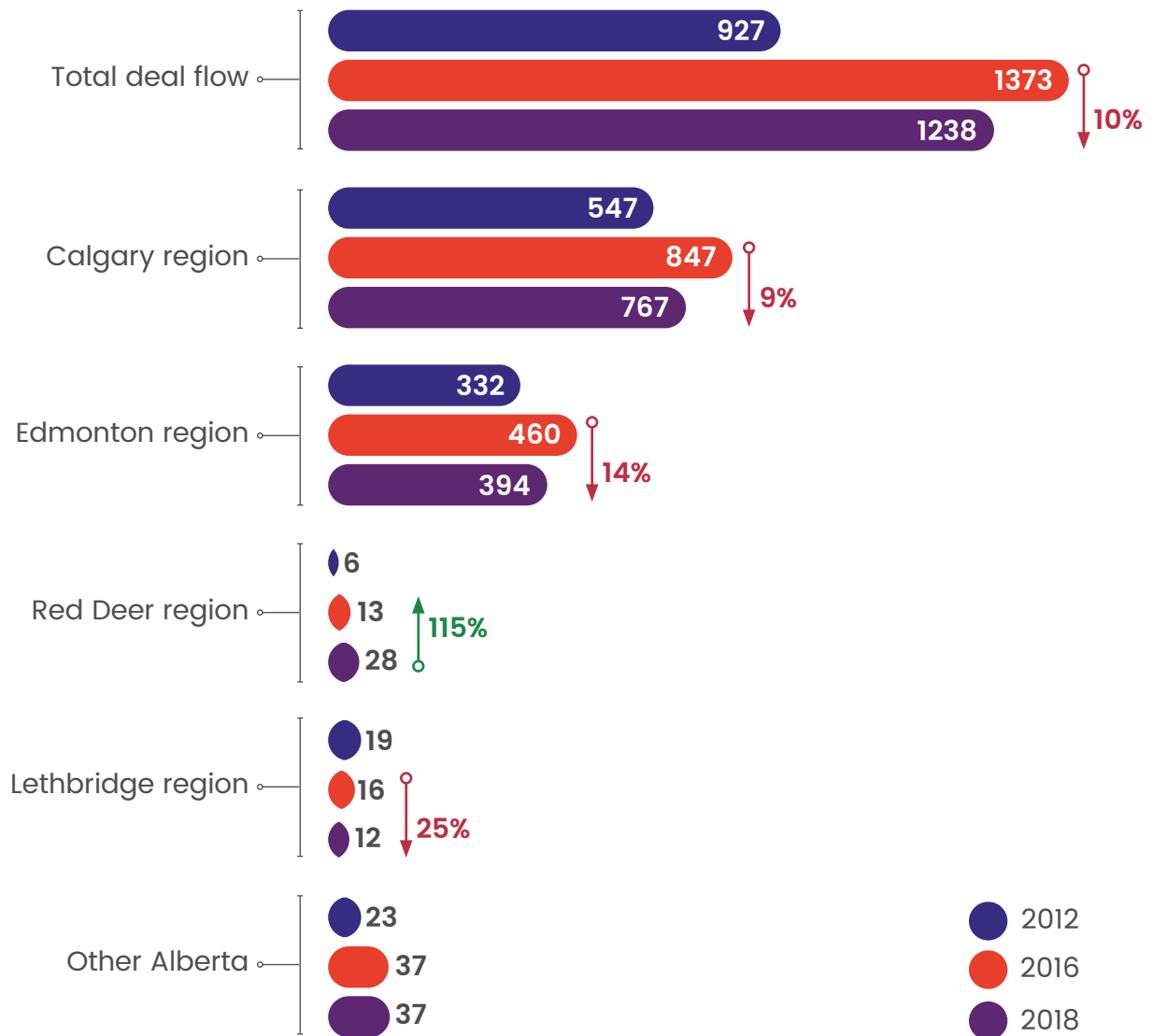


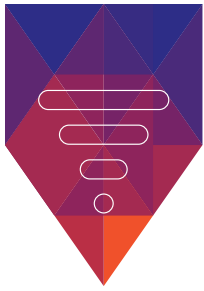


Regional Breakdown Over Time

Since 2016, the data indicates that the Edmonton region has seen a bigger drop in the proportion of technology companies operating there than has the Calgary region (down 14 per cent versus down 9 per cent).

Although the number of technology companies operating outside of Calgary and Edmonton is small, it's interesting to see that the number operating in the Red Deer region has doubled in the past two years (from 13 to 28).



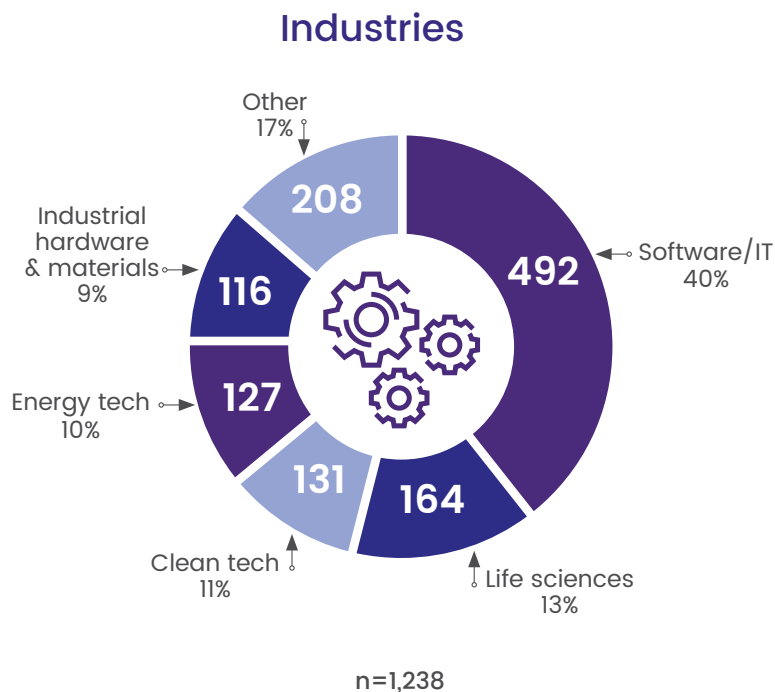


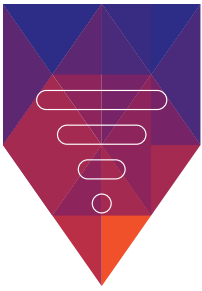
Industries

Among technology companies operating in Alberta, the most common are software companies (40%), followed by life sciences (13%), clean tech (11%), energy tech (10%), and industrial hardware and materials (9%) companies.*

Industries captured under "other" include:

- Consumer products (n=56, 5%)
- Electronics / instrumentation (n=44, 4%)
- Financial services (n=28, 2%)
- Agriculture (n=28, 2%)
- Telecom (n=23, 2%)
- Hardware (n=11, 1%)
- Mining (n=2, <1%)
- Tourism (n=2, <1%)
- Other unclassified companies (n=14, 1%)



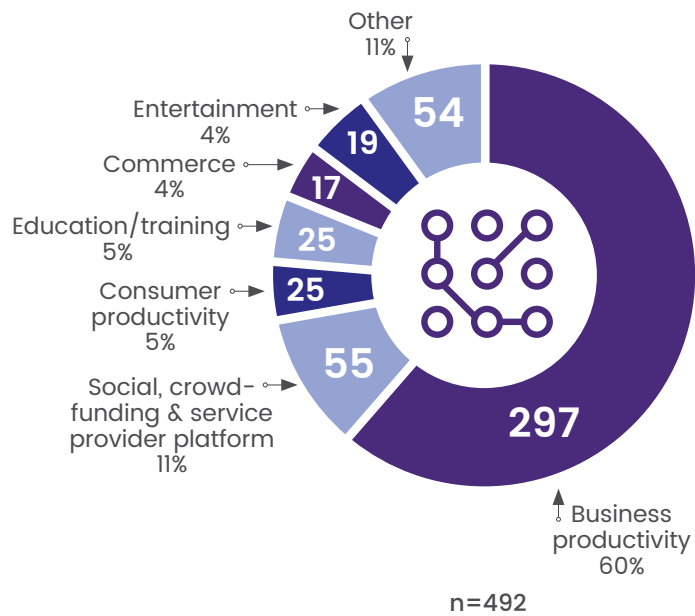


IT Verticals

Companies involved in software/IT tend to be:

- involved in the social platform (88%) or business productivity (71%) verticals
- new to the 2018 study (44%)
- based in Calgary (42%) or Edmonton (41%)

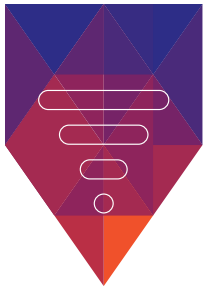
Software / IT Verticals



* Sector totals add up to more than 100% as the companies may overlap two or more sectors.



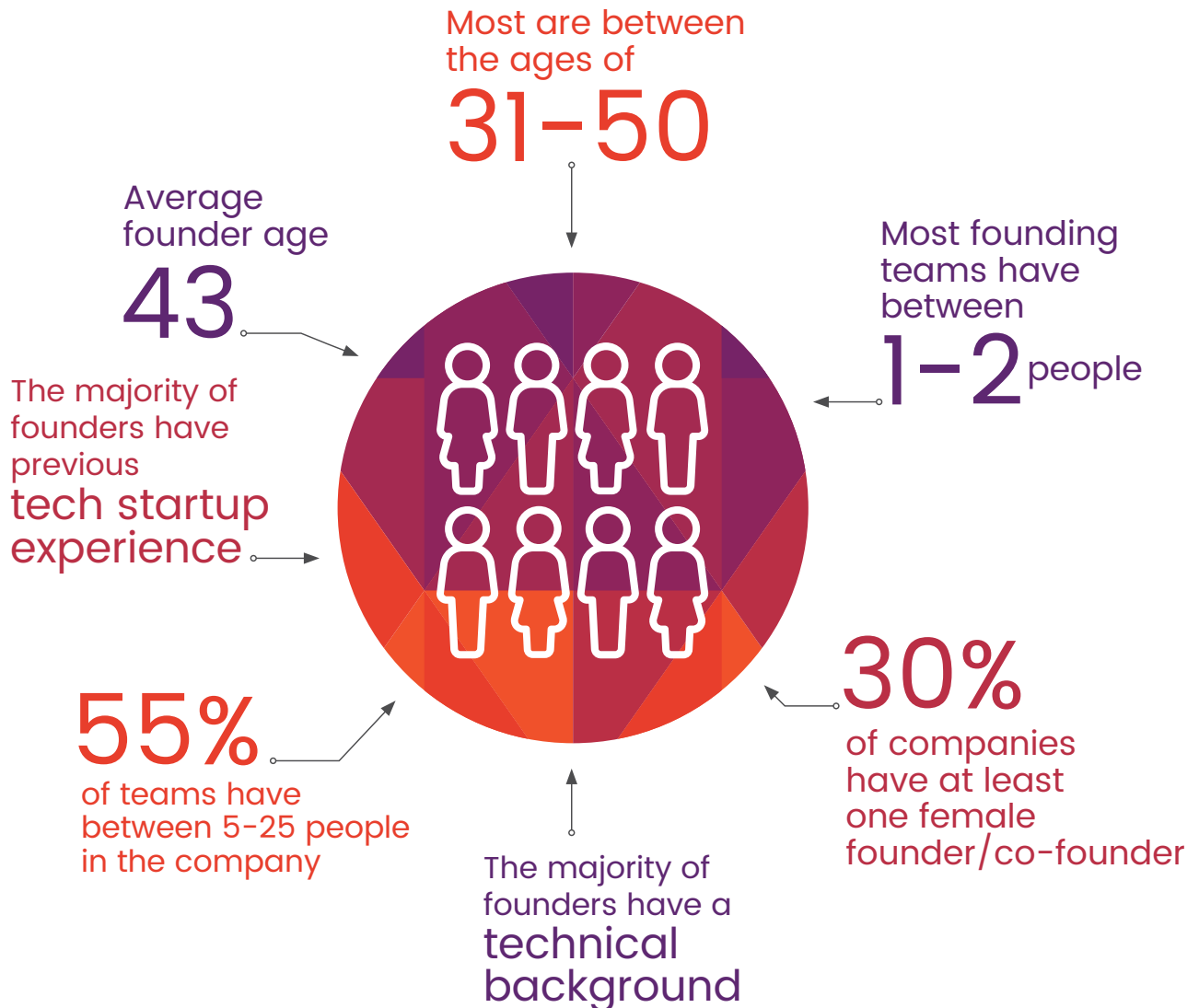
The People Story

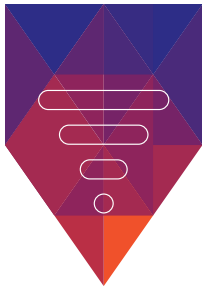


The People Story

The data from the following section is based on the survey phase of the Study. 208 tech companies and startups of the 1,238 identified, took part in the survey with a 17% participation rate.

Data highlights from the people-side of Alberta's tech sector, as gathered from survey respondents:





About the Founders

The majority of companies were founded by only one or two individuals (68%).

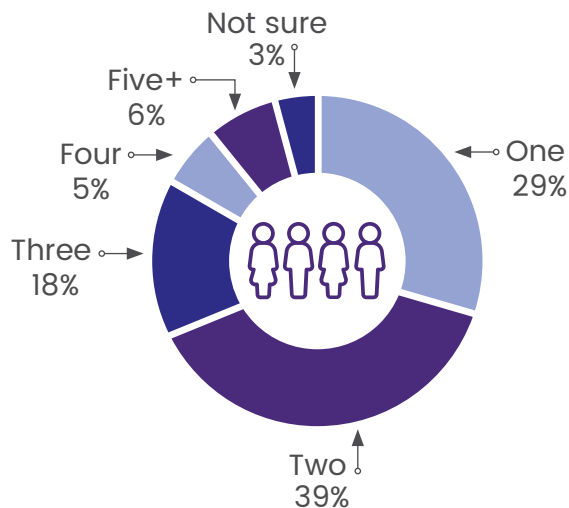
Companies that have only one founder tend to be:

- those that have received less than \$100,000 of funding to date (46%)
- those with fewer than five employees (42%)
- those that are developing a service (38%)
- those located in Edmonton (38%)

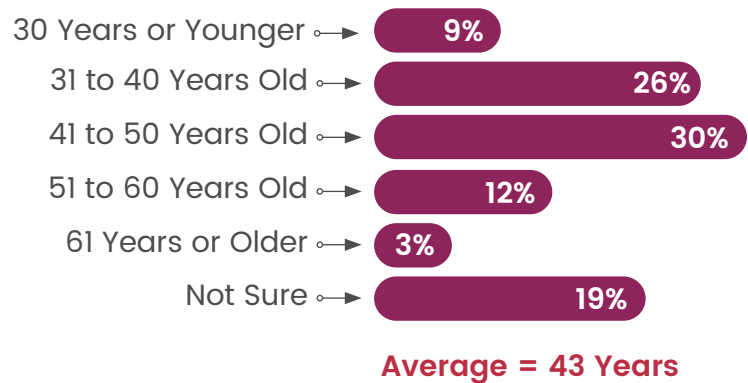
The founders tend to be mid-career, as most (56%) are between the ages of 31 and 50.

The average age of Alberta founders is 43, which is well-aligned with the US Census Bureau data as cited by Harvard Business Review,* which demonstrates that the average age of startup founders is 45.

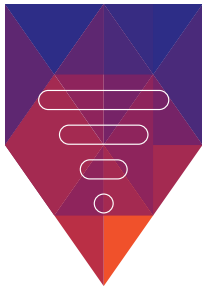
Number of Founders



Average Age of Founders



* (Harvard Business Review (HBR) July 2018 Report: <https://hbr.org/2018/07/research-the-average-age-of-a-successful-startup-founder-is-45>)



Characteristics of Founders

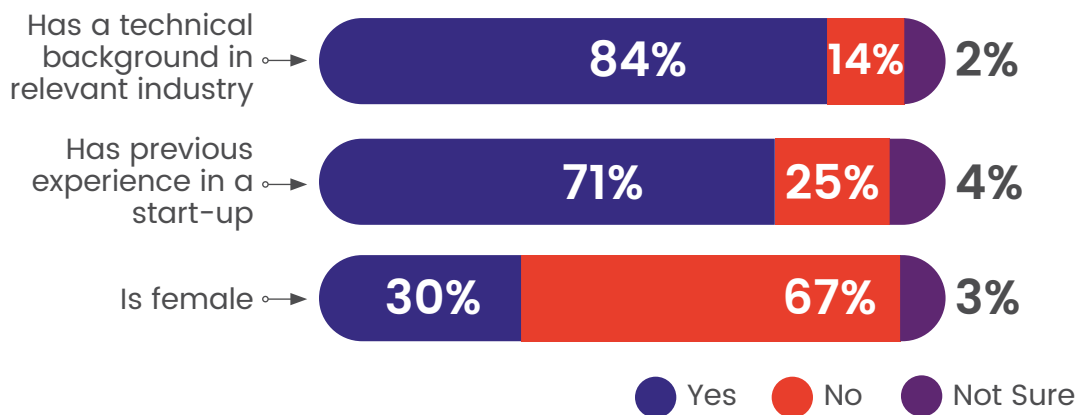
Female participation in the tech sector in Alberta is at 30%, up 50% from 2016 . This is over double the national average, according to the 2017 Move the Dial Benchmark Report*, which cites that only 5% of Canadian tech companies have a solo female founder, and only 13% of companies have a female co-founder.

Companies with at least one founder who is a woman tend to include:

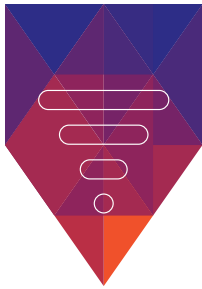
- those whose customers are in the consumer or life sciences industries (35%)
- those with revenues between \$100,000 to \$1 million in the last fiscal year (41%)

Companies with at least one founder with a technical background in their industry tend have more funding, as 91 per cent have received more than \$1 million in funding to date.

Characteristics of Founders



*(2017 Move the Dial Benchmark Report: https://docs.wixstatic.com/ugd/55c9d2_efb58fc4258b40978b5d2bc3a9d2a577.pdf).



About the Employees

Tech companies tend to be small in terms of staff numbers. 40% have fewer than five employees, and almost all (85%) have fewer than 25 employees. Companies in Edmonton and Calgary tend to be similar in this regard. This appears to be proportionate to the number of early stage tech companies.

Companies that have fewer than five employees tend to include:

- those who have received less than \$100,000 in funding to date (74%)
- those with revenues of less than \$100,000 in the last fiscal year (70%)
- those selling their product to individual consumers (53%)

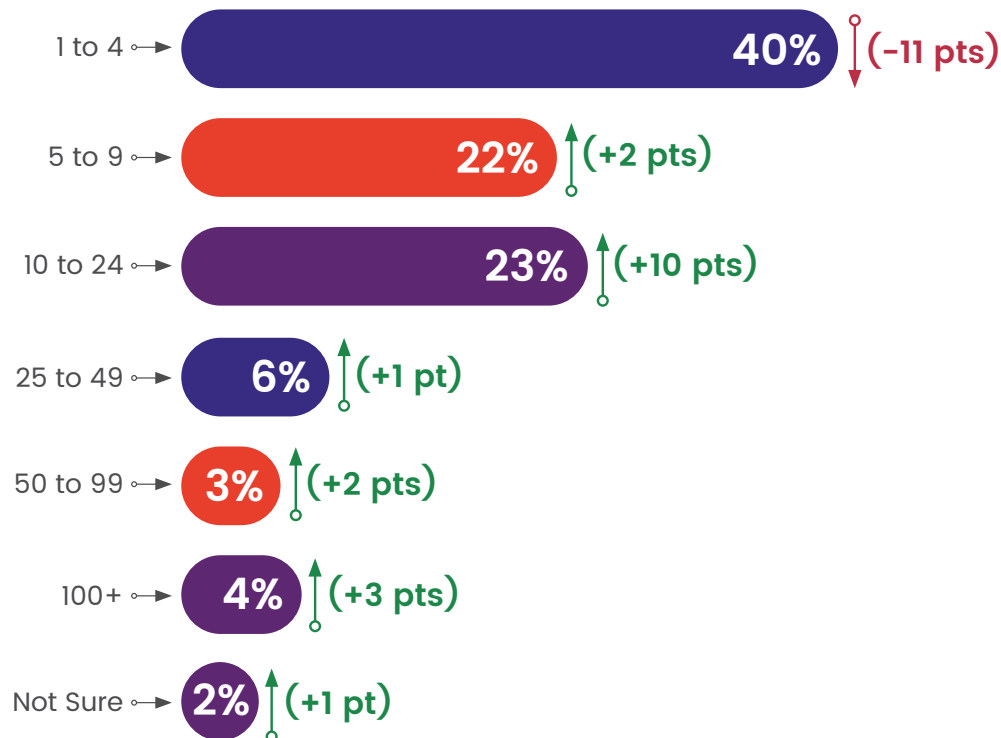
Companies that have five to nine employees tend to include:

- those with revenues between \$100,000 to \$1 million in the last fiscal year (38%)
- those who have received between \$100,000 to \$1 million in funding to date (36%)

Companies that have ten to 24 employees tend to include:

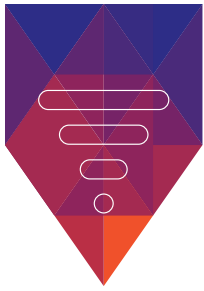
- those with revenues in excess of \$1 million in the last fiscal year (50%)
- those who have more than \$1 million in funding to date (40%)

Company Size (change since 2016)





The Company Story



The Company Story

Data highlights from the company-side of Alberta's tech sector, as gathered from survey respondents:

Calgary has **55%** of the tech companies

Edmonton has **41%**

48%

are developing a SaaS product

43%

use a mix of in house production & outsourcing to develop their product

68%

consider themselves a startup

39%

are targeting government as a customer

Over half the tech companies were started in **2014 or later**

45%

have achieved product traction & are scaling

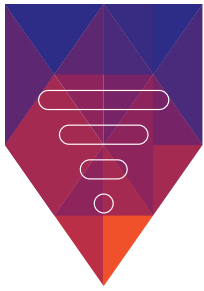
34%

are developing a product which incorporates AI/ML

95%

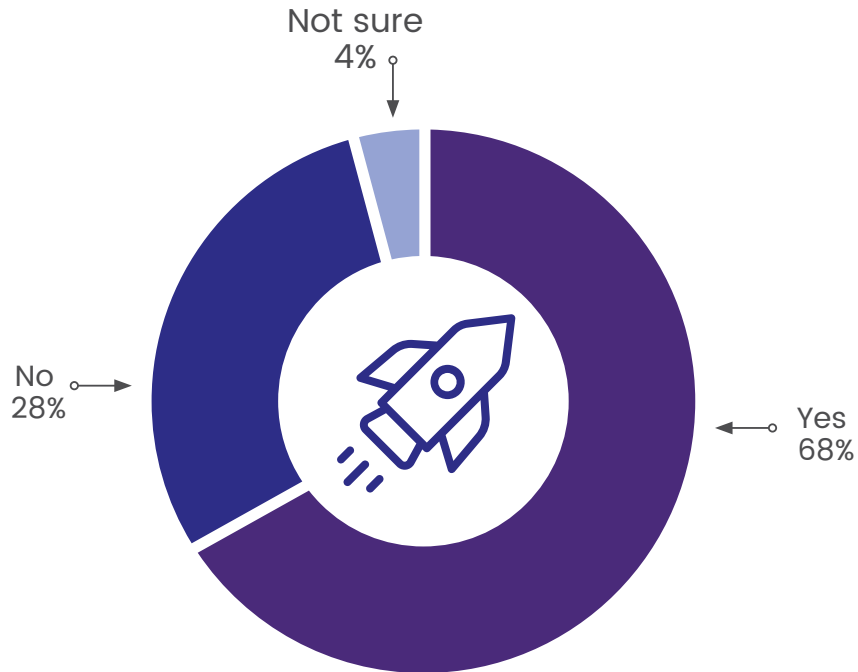
are targeting private enterprises as their primary market with:

- **34%** Energy focused
- **30%** Life sciences focused
- **29%** IT focused

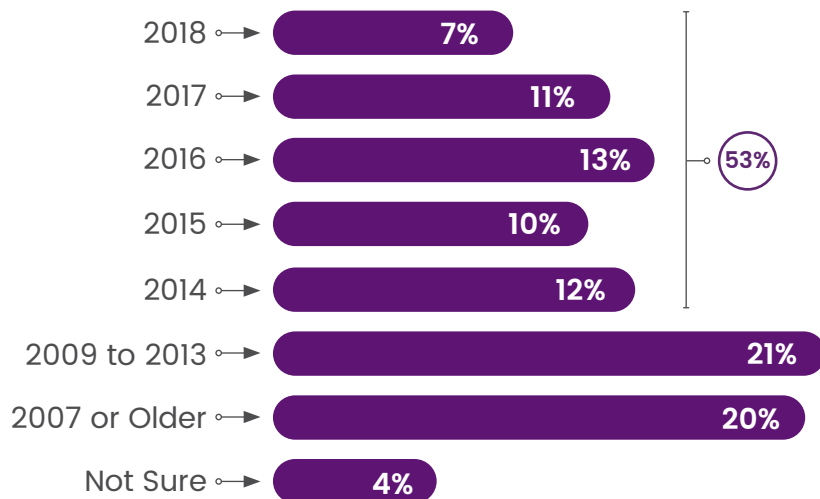


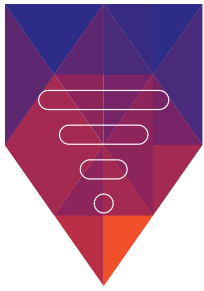
About the Companies

Is the Company a Start-up?



Year Company Founded





About the Companies Continued

One in five companies (19%) were spun off from academic research. And these companies tend to include:

- those involved in the life sciences industry (37%)
- those developing a product only (34%)
- those located in Edmonton (28%)

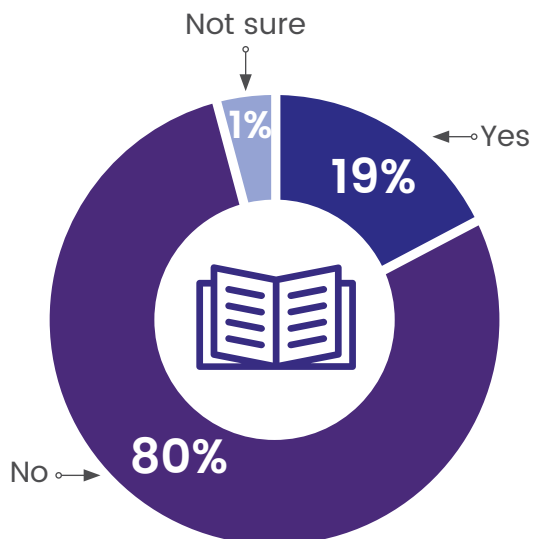
Companies that exclusively build in-house tend to include:

- those with revenue over \$1 million in the last fiscal year (67%)
- those developing a product or service in the AI (65%) or SaaS/Enterprise verticals (63%)
- those with five to 24 employees (62%)

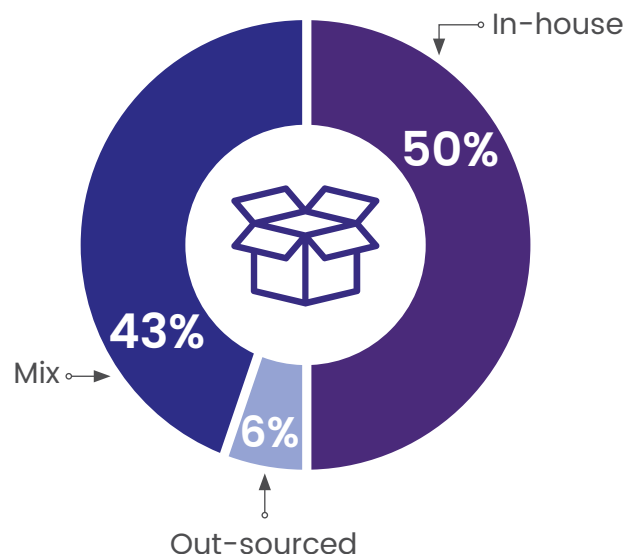
Companies that have mixed production (in-house and out-sourced teams) tend to include:

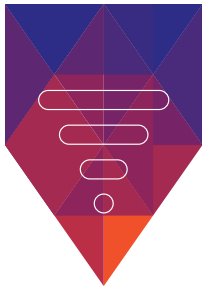
- those developing a product or service in the equipment vertical (60%)
- those developing an innovative physical product (59%)
- those with less than five employees (54%)
- those with revenues of less than \$100,000 in the last fiscal year (51%)

Company Spun-off from Academic Research



Who Develops the Product





What They Are Selling

Companies developing a combination of product and service include:

- those that are developing a product or service in the equipment (64%) vertical
- those with less than \$100,000 revenue in the last fiscal year (38%)

Companies developing a product include:

- those that were spun off of academic research (38%)
- those who raised between \$100,000 to \$1 million (25%) or more than \$1 million (31%) in their most recent round of fundraising
- those with more than \$1 million in funding to date (31%)

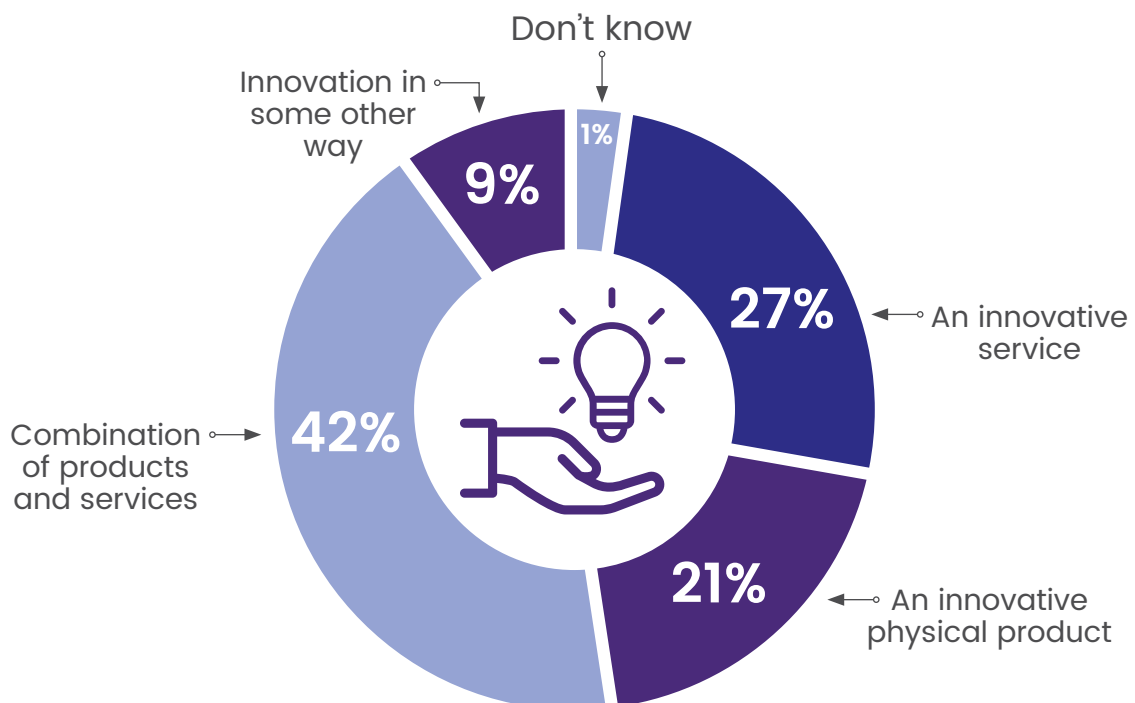
• those whose customers are in the clean tech (29%) or life sciences (27%) industries

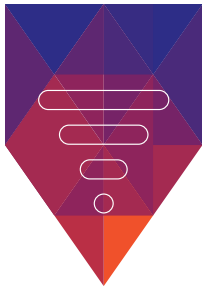
• those developing a product or service in the equipment vertical (28%)

Companies developing a service include:

- those developing a product or service in the SaaS/enterprise (41%), social platform (35%), or AI/ML (34%) verticals
- those whose customers are in the IT industry (34%)
- those with less than \$100,000 revenue in the last fiscal year (33%)

Company is Developing...





What They are Selling – Vertical Focus*

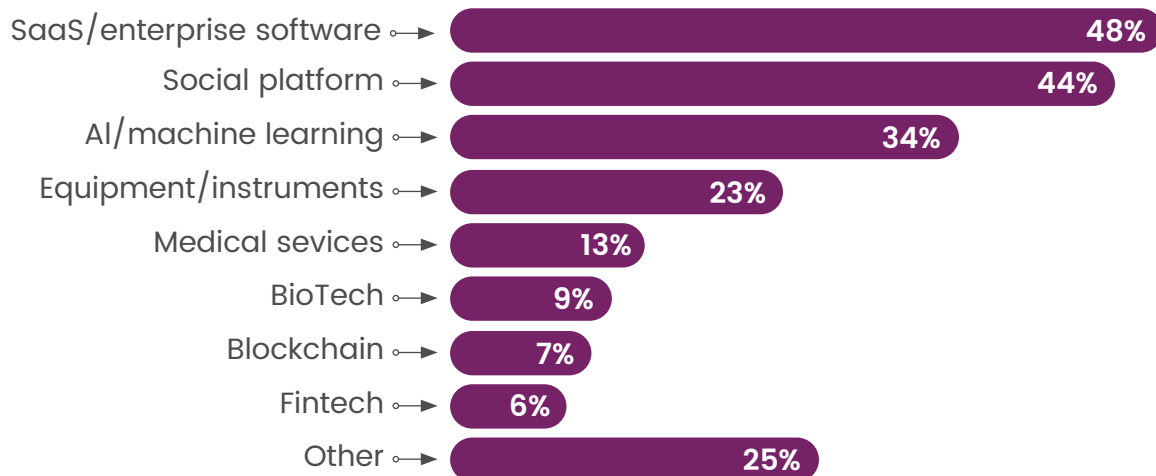
Companies developing a product related to SaaS include:

- those whose customers are in IT (82%), energy tech (59%), industrial tech/materials (57%), or electronics/instrumentation (53%)
- those developing a service (73%)
- those with over \$1 million of revenue in the last fiscal year (63%)
- those based in Calgary (54%)
- those selling their product to the government (53%)

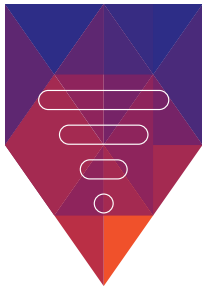
Companies developing a product related to AI include:

- those whose customers are in IT (59%) or clean tech (40%)
- those selling their product to the government (47%)

Product / Services Being Offered



* Vertical totals add up to more than 100% as the companies may overlap two or more verticals..



About the Products – Development Stage

Companies in the traction/scaling stage include:

- those developing a service (61%)
- those whose customers are in IT (59%) or electronics/instrumentation (53%)
- those developing a product or service in the SaaS/enterprise vertical (59%)
- those with five to 24 employees (55%)

Companies in the commercial product development phase include:

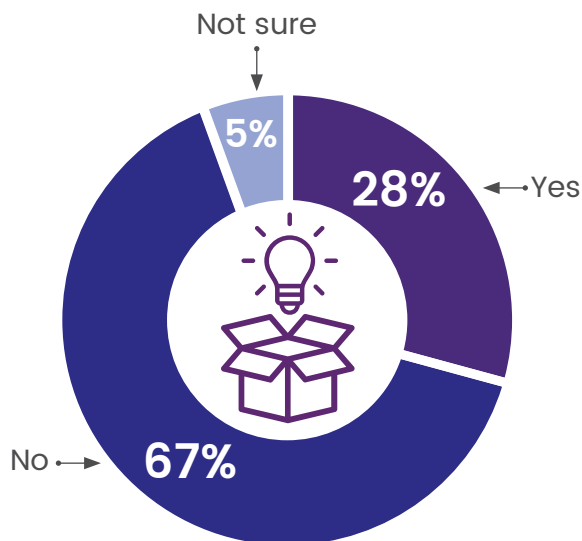
- those with revenue in excess of \$1 million in the last fiscal year (79%)
- those who do not describe themselves as startups (68%)
- those who raised more than \$1 million in their most recent round of fundraising (56%)

- those developing an innovative physical product (32%)
- those whose customers are in the clean tech (22%) or life sciences (21%) industries

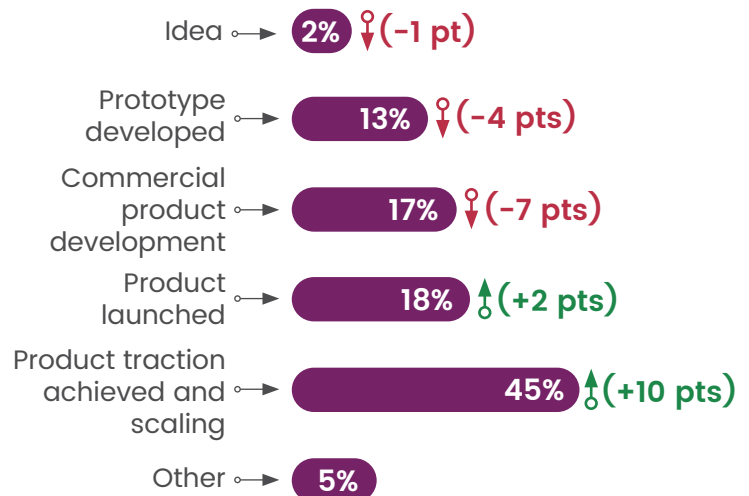
Relative to 2016, the proportion of companies in the traction/scaling phase is up 10 points from 35 to 45 per cent, and the proportion of companies in the product launch phase has increased by two points from 16 to 18 per cent. Correspondingly, there has been a 12 point decrease in the proportion of companies in earlier stages of product development.

This data demonstrates that successful companies are growing and maturing, while the number of startups in the initial phases has seen decline.

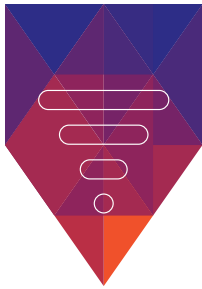
Participate in an Accelerator*



Development Stage of Product (change since 2016)



*Two-thirds (67%) of companies have not participated in an accelerator program. Companies with revenues between \$100,000 to \$1 million in the last fiscal year, or were founded between 2012 to 2015 are most likely to have participated in an accelerator program.



Target Market – Customer Type

Almost all companies (95%) sell or intend to sell their product to other private business or enterprises. Two in five sell or intend to sell to government (39%) or individual consumers (38%).

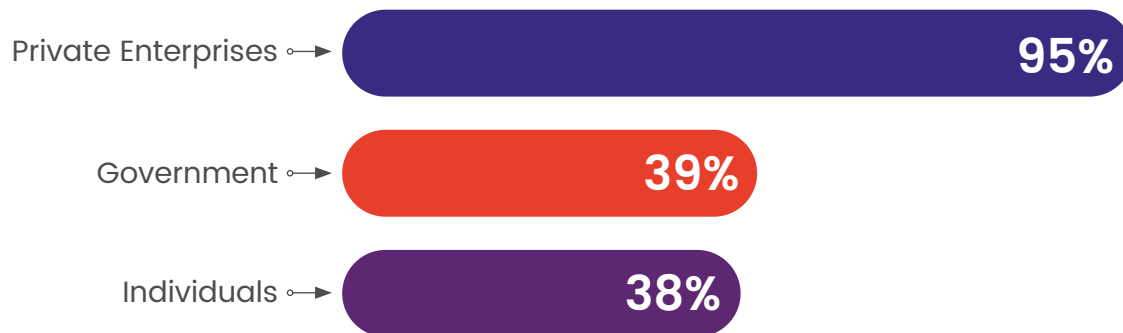
Companies who intend to sell to government include:

- those whose customers are in the electronics/instrumentation (61%), clean tech (60%) industrial tech/materials (60%), life sciences (58%), or IT industries (56%)

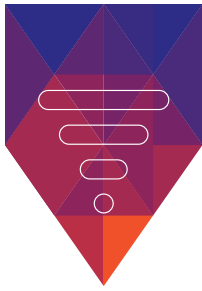
Companies that sell to individuals include:

- those whose customers are in the consumer (74%), life sciences (48%) or electronics/instrumentation (42%) industries
- those with less than \$100,000 of revenue in the last fiscal year (46%)

Target Customer*



* Totals add up to more than 100% as the companies may indicate they intend to sell to multiple customer types.



Target Market – Industry

Companies targeting life sciences include:

- those that sell to government (44%)
- those based in Edmonton (41%)

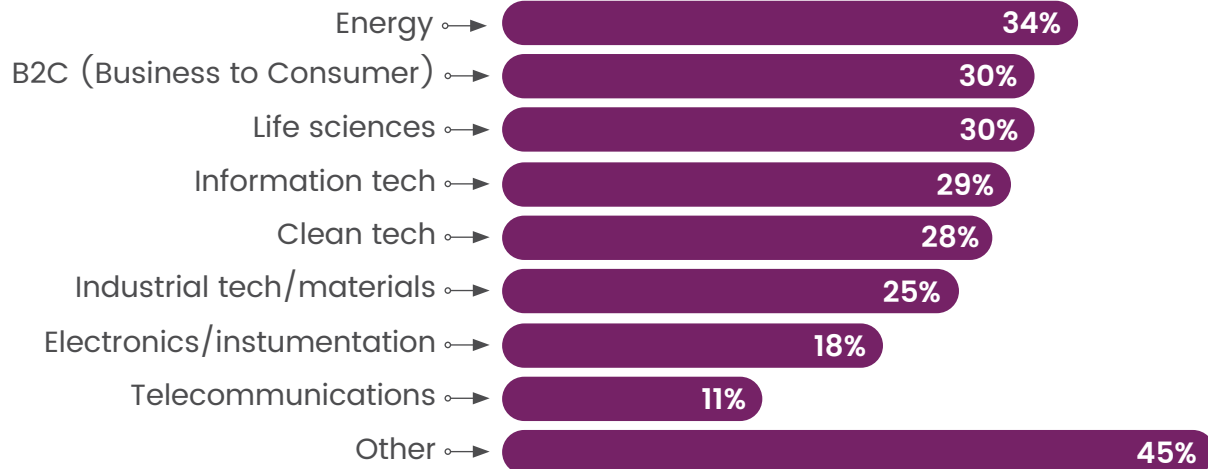
Companies targeting IT include:

- those that have spun off of academic research (59%)
- those developing a product or service in the AI/ML (51%)
- those who sell to government (42%)

Companies targeting clean tech include:

- those who sell to government (43%)
- those developing a physical product (39%)

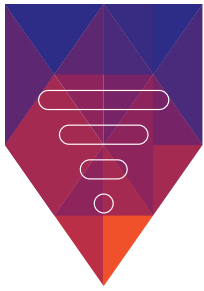
Target Customers' Industries



* Totals add up to more than 100% as the companies may indicate they intend to sell to multiple target customers.

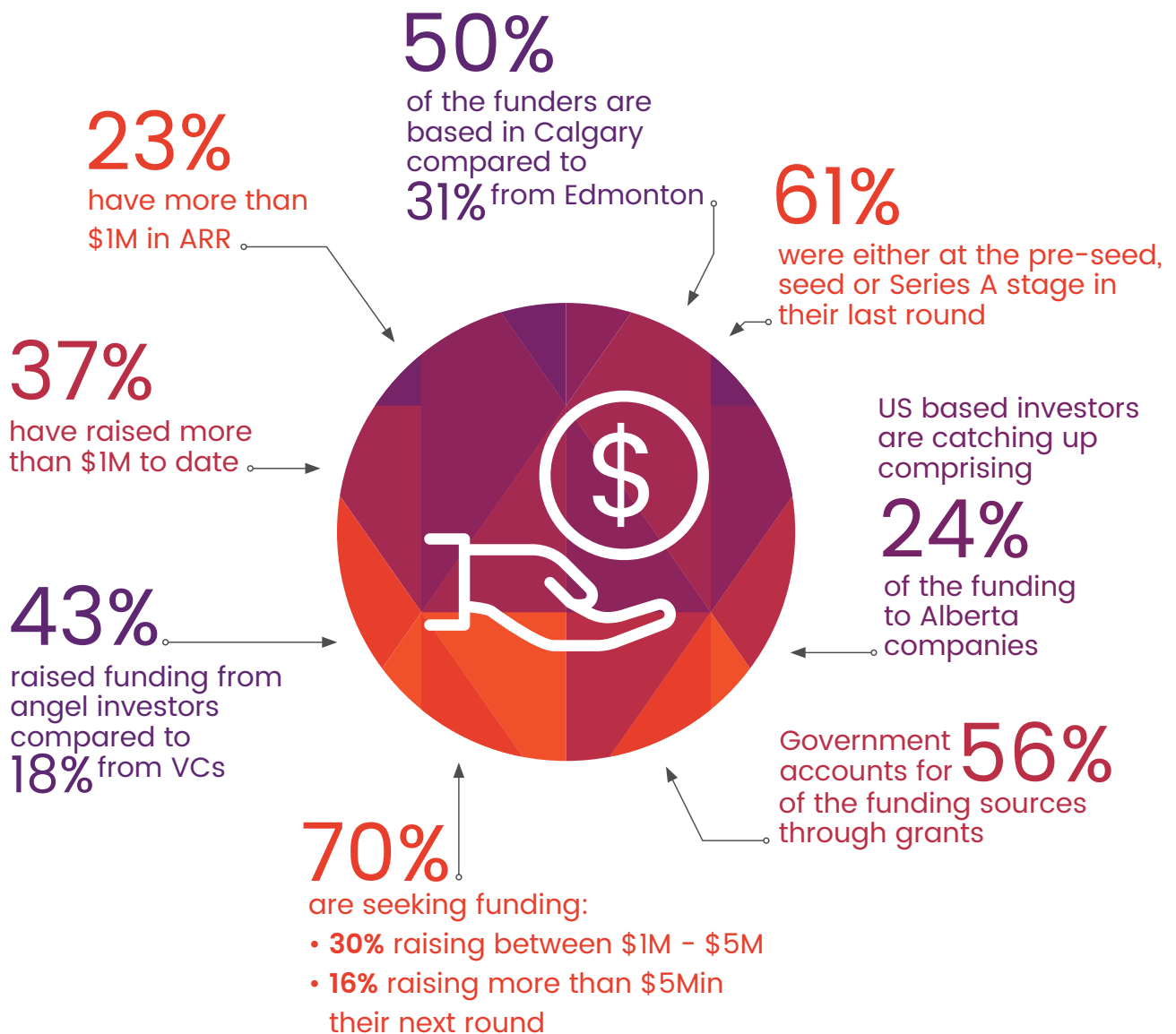


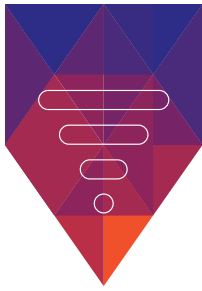
The Capital Story



The Capital Story

Data highlights from the capital-side of Alberta's tech sector, as gathered from survey respondents:





Current Revenues

Over 50% of companies are earning more than \$100,000 in revenue per annum. Approximately 25% of companies are earning annual revenue of more than \$1 million.

Companies in the pre-revenue stage or with revenue under \$100,000 in the last fiscal year include:

- those with fewer than five employees (74%)
- those whose clients are in the consumer industry (50%)
- those developing a product in the equipment (44%) or social platform (43%) verticals

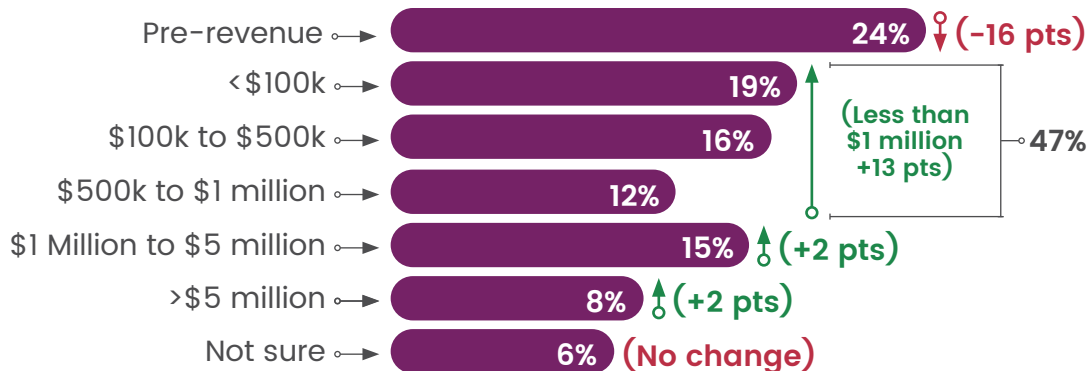
Companies that have made between \$100,000 and \$1 million in the last fiscal year include:

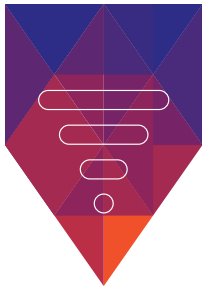
- those with between five to 24 employees (42%)
- those whose customers are in the clean tech (37%) or industrial tech/materials (34%)
- those developing a product in the medical devices vertical (35%)

Companies that have made over \$1 million in the last fiscal year include:

- those with more than 25 employees (75%)
- those whose customers are in the electronics/instrumentation (37%) or IT (30%) industries
- those developing a product in the SaaS/enterprise vertical (30%)

Annual revenue in most recent fiscal year (change since 2016)





Next Round of Fundraising

Just under half (46%) intend to raise more than \$1 million, three in ten (29%) intend to raise between \$100,000 and \$1 million, and one in ten (11%) intend to raise less than \$100,000.

Companies planning on raising more than \$1 million are more likely to be:

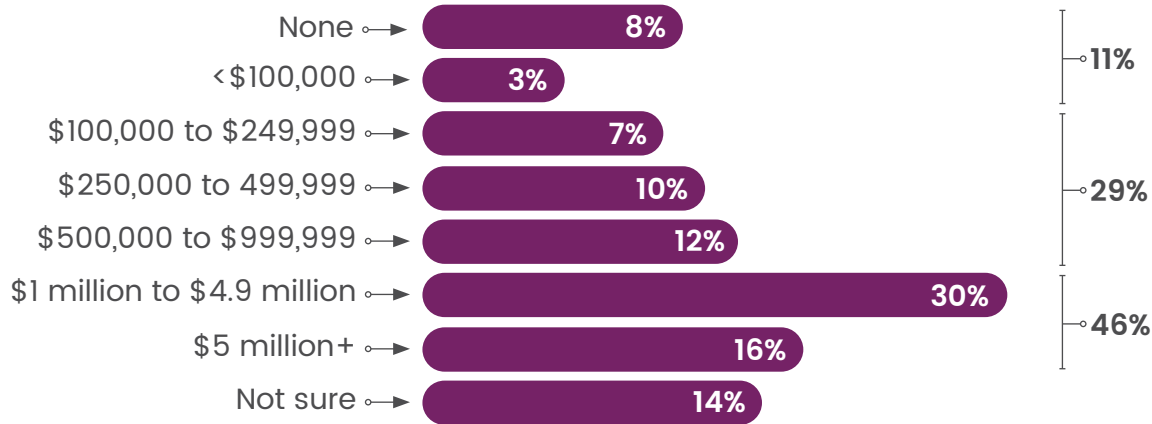
- those who have received more than \$1 million of funding to date (76%)
- those with revenues of over \$1 million (62%) or between \$100,000 to \$1 million (53%) in the last fiscal year
- those who spun off from academic research (59%)

- those who produce their product in-house (53%)
- those that have raised funds through equity (37%)
- those that took longer than six months for their last fundraising campaign (37%)

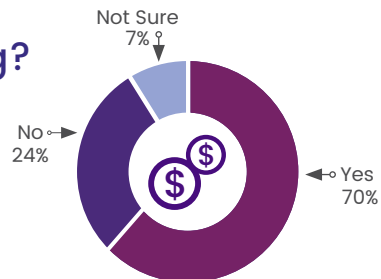
Seven in ten (70%) companies are currently seeking funding. And those seeking funding tend to be:

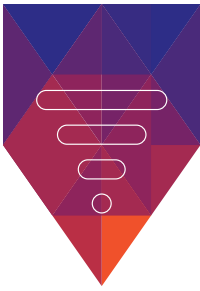
- those that made less than \$100,000 in the last fiscal year (80%)
- those that received government grants (87%)
- start-ups (77%)

Goal for Next Round of Fundraising



Currently Seeking Funding?





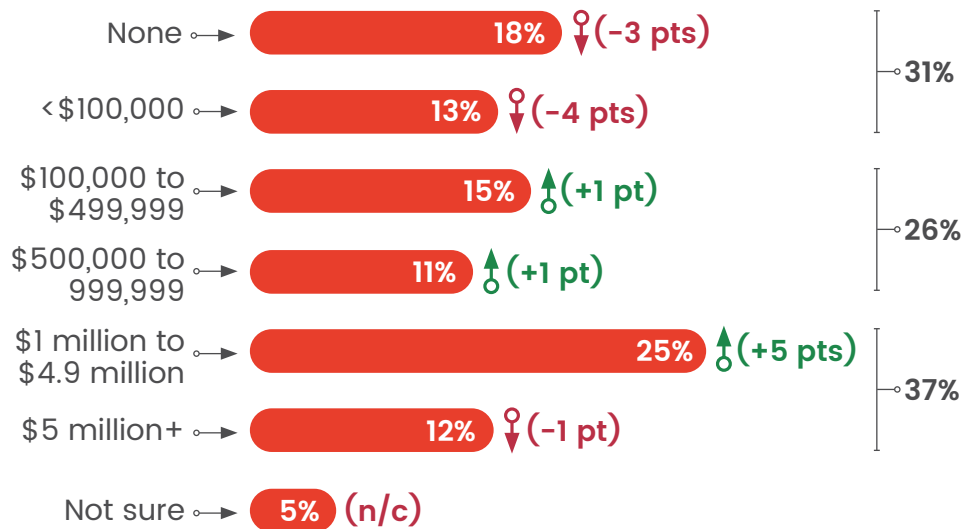
Total Funding Received to Date

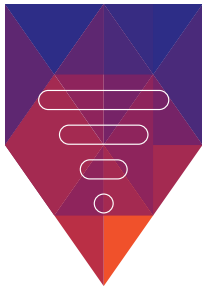
37% of companies have received over \$1 million in funding to date. 26% have received between \$100,000 to \$1 million, and 31% have received less than \$100,000.

Companies that have received more than \$1 million in funding to date include:

- those with 25 or more employees (68%)
- those developing a physical product (54%)
- those producing their product in-house (44%)

Total Funding Received to Date (change since 2016)





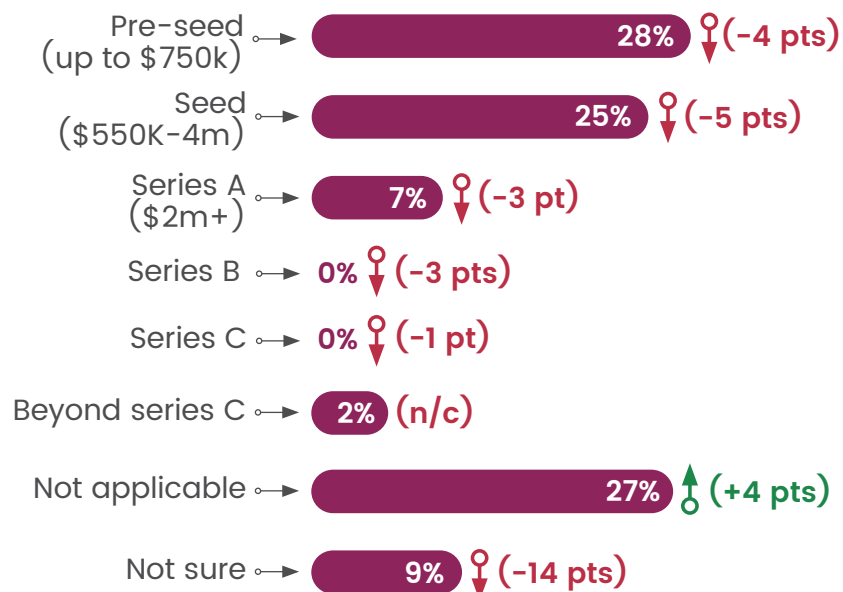
Funding Stage

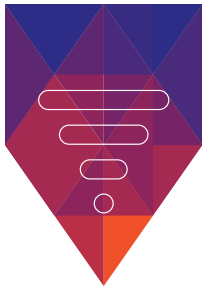
In terms of funding stage, about 53% are either at the Pre-seed or Seed stage. 7% of companies are at Series A, and only 2% are Beyond Series C.

No companies which participated in the survey are at either Series B or C.

Companies at the Seed stage of funding are more likely to have raised funds through equity stakes (35%) or hybrid financing (41%), and are more likely to have participated in an accelerator program (36%).

Funding Stage (change since 2016)





Most Recent Fundraising – Totals

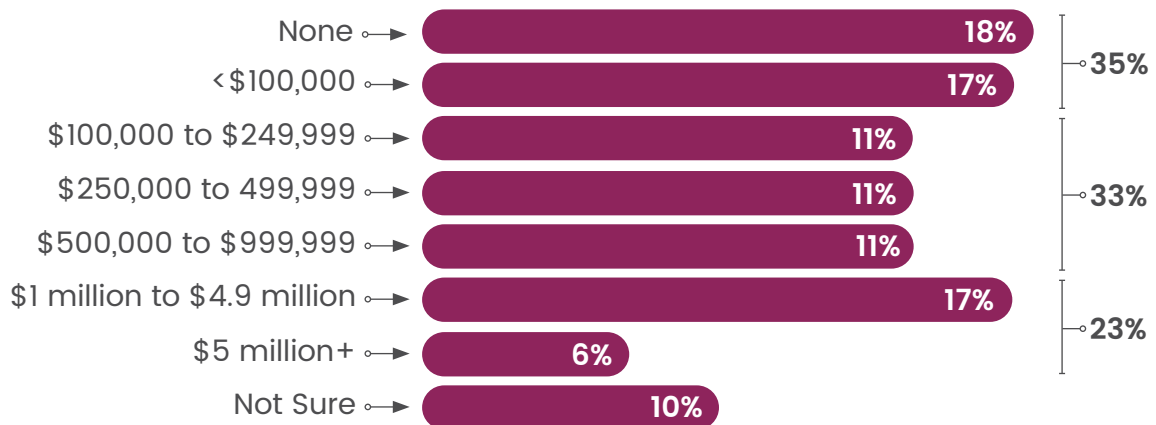
Companies that have recently raised less than \$100,000 in the last round include:

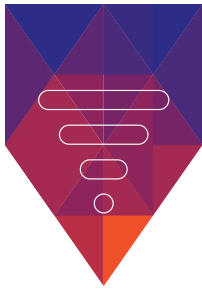
- those who are outsourcing production (54%)
- those with fewer than five employees (45%)
- those that have accessed government grants/credits (44%) or debt (33%) funding
- those whose fundraising campaign was less than six months long (38%)
- those developing an innovative service (35%)
- those selling to individuals (34%)

Companies that have recently raised more than \$1 million in the last round include:

- those with 25 or more employees (61%)
- those whose fundraising campaign was more than six months long (37%)
- those that have accessed equity (37%), hybrid (32%), or debt (31%) funding
- those developing a physical product (34%)
- those based in Calgary (27%)

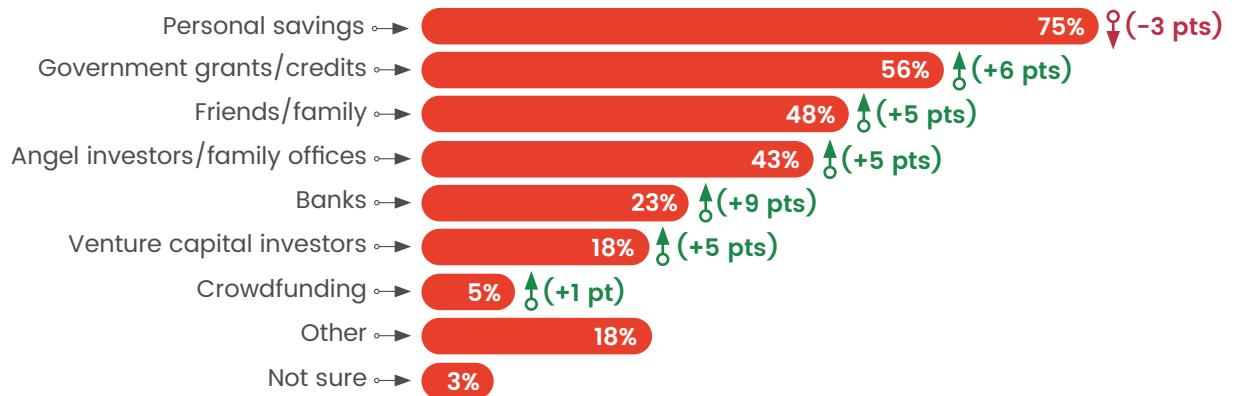
Amount Raised in Last Round of Fundraising



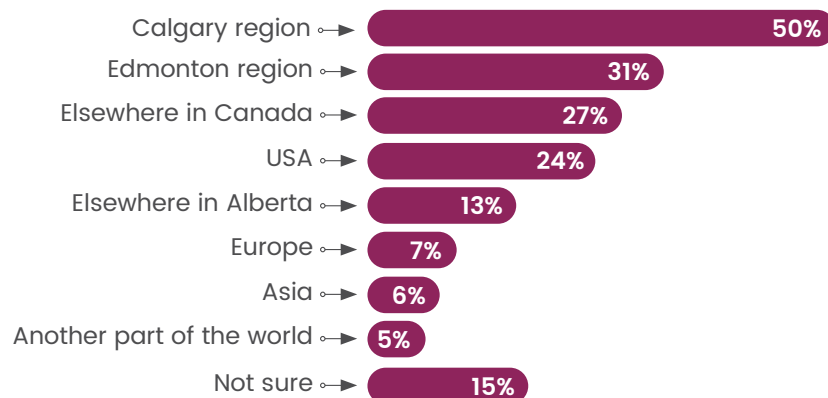


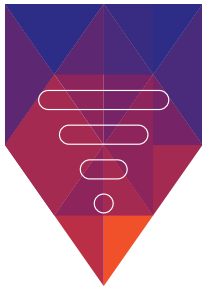
Most Recent Fundraising – Sources

Funding Sources (change since 2016)



Location of Funders





Most Recent Fundraising – Details

Companies that have accessed equity funding include:

- those who have raised more than \$1 million in their most recent round of fundraising (79%)
- those who have raised more than \$1 million to date (73%)
- those at the Seed stage of funding (71%)
- those with five to 24 employees (63%)
- those in the scaling phase (55%)

Companies that have accessed hybrid funding include:

- those at the seed stage of funding (27%)
- those that have raised over \$1 million to date (22%), or between \$100,000 to \$1 million (20%)
- startups (21%)

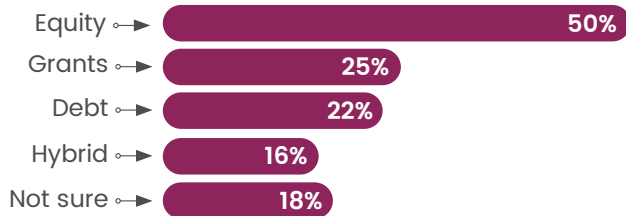
Companies that have accessed debt funding include:

- those that are in or just finished commercial product development (32%)
- those that have raised between \$100,000 to \$1 million to date (29%) or over \$1 million (27%)

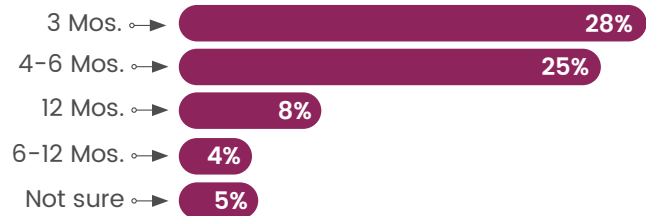
Just over half (53%) of companies surveyed took less than six months to raise funds in their last fundraising campaign (including 28% who took less than three months, and 25% who took four to six months).

Faster is not necessarily better, as companies that took longer than six months tended to raise more money than companies that took less than six months for their campaign to close.

Funding Type

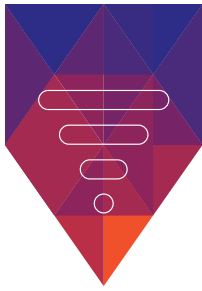


Fundraising Duration



Appendix 1

Deal Flow Studies Over Time



Deal Flow Studies Over Time

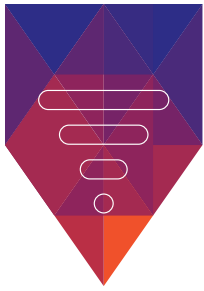
Year	2009	2012	2016	2018
Totals				
Number of companies meeting criteria	736	927	1,373	1,238
Qualified companies by region				
Calgary	67%	59%	62%	62%
Edmonton	31%	36%	33%	32%
Other	2%	5%	2%	6%
Qualified companies by industry				
Software	48%	49%	54%	40%
Life Science	17%	18%	12%	13%
Clean Tech	7%	7%	8%	11%
Energy Tech	10%	7%	9%	10%
Industrial Hardware and Materials	11%	9%	9%	9%
Other	5%	10%	8%	17%
Survey information				
*Survey Respondents	-	-	255	208
*Survey Response Rate	-	-	19%	17%

**The survey portion of the Alberta Tech Deal Flow Study was only introduced in 2016 and expanded in 2018.*



Appendix 2

Glossary of Terms



Glossary of Terms

Funding Rounds & Sources of Funding

Angel

Investment by an individual in a company from their individual funds and not using funds raised from other people.

Pre-seed and/or Seed

When any investor type provides the initial financing for a new enterprise that is in the earliest stages of developing.

Early Stage VC

An early stage financing by a venture capital firm in a company. Early stage is usually a Series A to Series B financing.

Later Stage VC

A later stage round of financing by a venture capital firm into a company. Later stage is usually Series B to Series Z+ rounds.

Crowdfunding

Financing received from a crowdfunding platform through which individuals have provided non-equity funding in exchange for companies' products, generally before they have been released to the market.

Other Funding Types

Equity

Ownership stake in a company, usually in exchange for investment.

Debt

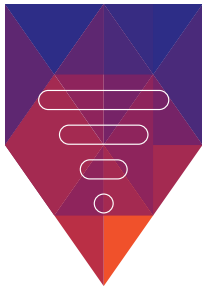
Borrowed money with repayment expectations. Usually from banks.

Grants

Usually financial support from government and government funded agencies and typically does not include the recipient company giving up equity.

Convertible Note

A form of short-term debt that converts into equity, typically in conjunction with a future financing round; in effect, the investor would be loaning money to a start-up and instead of a return in the form of principal plus interest, the investor would receive equity in the company.



Glossary of Terms Continued

Sectors & Verticals

NB

This is not intended to be an exhaustive list. With the ever-expanding list of technology verticals, it was not possible to comprehensively cover every possibility in the 2018 Deal Flow Study. In some cases, there may also be different interpretations of what fits as an overall industry sector versus what constitutes a specific vertical or sub-vertical.

Analytics/Big Data

Companies providing a product or service where the core technology handles data that is too large for traditional database systems, usually due to data volume, data velocity, or data variety.

Artificial Intelligence/Machine Learning

Companies developing technologies that enable computers to autonomously learn, deduce and act, through utilization of large data sets.

Blockchain

Blockchain refers to a distributed public database which keeps a permanent and incorruptible record of digital transactions. Blockchains are unique in that they cannot be controlled by a single entity and have no single point of failure.

Business Productivity

Software products aiming to increase business productivity and efficiency.

Consumer Equipment/Device

Consumer focused hardware device. Includes entertainment devices, appliances and other electronics.

CleanTech

technology products that are not primarily software based, that have a focus on reducing waste and requiring as few non-renewable resources as possible.

Consumer

consumer products and services.

Electronics/Instrumentation

electronic & semiconductor.

Energy Tech

technology products that are not primarily software based relating to the efficient, sage, environmentally friendly and economical extraction, conversion, transportation, storage and use of energy.

Healthcare Equipment/Device/Healthcare Service

Companies engaged in building hardware solutions to empower individuals to more easily keep track of their health, and provide healthcare providers better tools to communicate with and treat patients.

Industrial/Materials

Equipment and material manufacturing.

Industrial Chemicals

Innovative industrial chemical compound.

Industrial Equipment/Device

industry aggregate intended to capture companies engaged in providing industrial and commercial hardware.

Internet of Things (IoT)

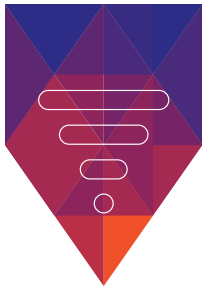
A company that provides a product that is enabled with sensors and actuators embedded in physical objects, and/or software that uses this sensor data to improve the user experience or allows for sharing this data with a network of other devices, often using the same Internet Protocol (IP) that connects the Internet.

I.T. (Information Technology)

Computer hardware/software & services, Internet software & services, eCommerce.

Knowledge-Based Industries

A sector of economic activity concerned with products and services that are based on the innovative application of technology and includes the following: information technology, communications technology, life sciences technology, nanotechnology and environmental technology. And associated industry verticals.



Glossary of Terms Continued

Life Sciences

Biotech, medical devices, pharmaceuticals, eHealth, healthcare products and services, and other medical related products and services.

Marketing Tech

Marketing technology consists of tools that automate and simplify tasks for marketers, reducing the need for IT involvement.

Medical Device

Health/Medical focused mechanical or electronic equipment.

Mining & Resources

Non-oil and gas natural resources

Mobile

Companies whose primary revenue source comes from providing services for mobile devices or enabling mobile communications.

Oil & Gas, Power

Oil & gas, power and utilities.

Pharmaceuticals

Compound manufactured for use as a drug to diagnose, cure, treat or prevent disease.

Real Estate

Property development and management.

Social Media/Platform

Software products aiming to connect users with other users or businesses.

Software as a Service (SaaS)

Information technology companies which provide software that is available for login through the Internet AND who sell that software to customers through an ongoing subscription. A SaaS company sells software for online use that a person or company has to purchase.

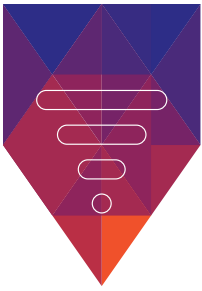
Telecomm

Mobile & telecom and services.



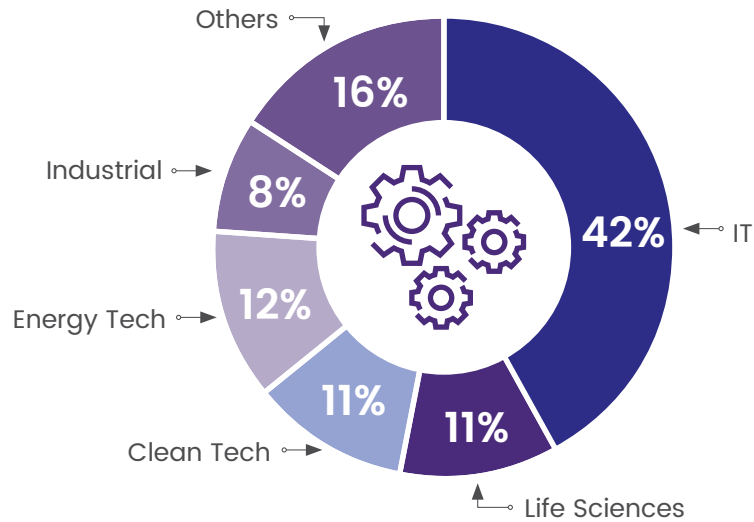
Appendix 3

Industry Breakdown by Region

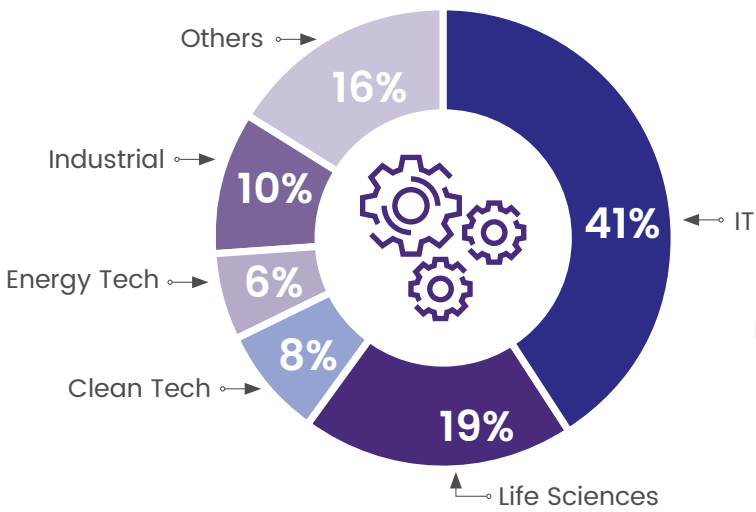


Industry Breakdown by Region

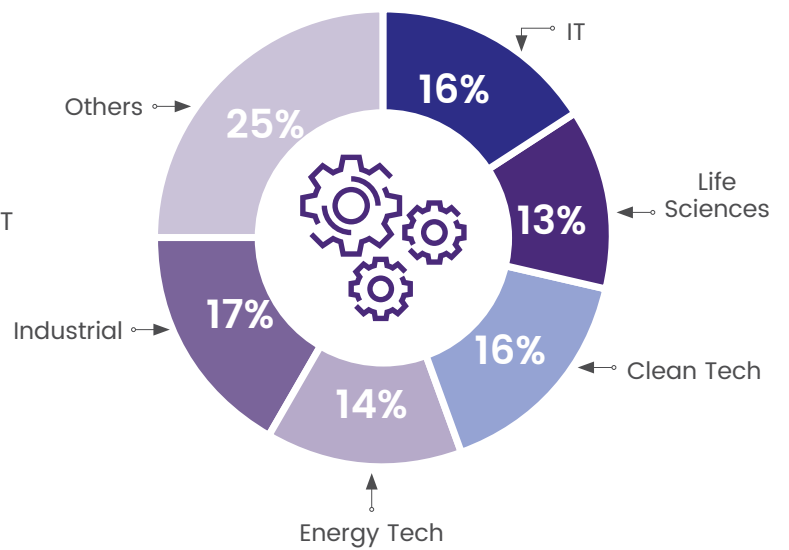
Industry Breakdown for Calgary (n=767)



Industry Breakdown for Edmonton (n=394)



Industry Breakdown for Other AB (n=77)



Appendix 4

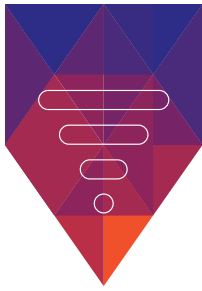
Summary of Responses by Key Demographics

Overall Alberta Tech Sector
Q. 4-8

Company Data
Q. 9-15, Q. 25-28

Fundraising
Q. 16-24

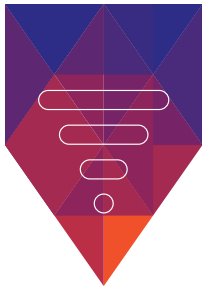
The People
Q. 9&10, Q. 27,29,30



Overall Alberta Tech Sector

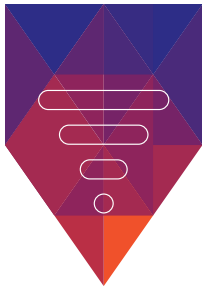
	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 –2015	2016–
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q4. Who do you or will you be selling your goods or services to?												
Private industry / enterprises	95%	92%	98%	98%	87%	*100%	98%	97%	98%	97%	94%	92%
Government	39%	33%	44%	60%	37%	49%	60%	58%	56%	29%	50%	37%
Individual consumers	38%	36%	40%	33%	74%	21%	26%	48%	34%	36%	33%	45%
Not sure / Prefer not to say	0%	0%	1%	0%	2%	0%	0%	0%	0%	0%	0%	2%
Q5. Which industries does or will your company sell its products / services to?												
Clean tech	28%	27%	30%	100%	29%	63%	62%	34%	33%	25%	33%	26%
Consumer	30%	30%	29%	31%	100%	29%	40%	34%	39%	26%	35%	32%
Electronics / Instrumentation	18%	17%	20%	40%	35%	37%	42%	29%	34%	22%	18%	14%
Energy	34%	37%	30%	76%	32%	100%	77%	34%	44%	30%	38%	31%
Industrial / Materials	25%	20%	33%	57%	34%	59%	100%	42%	38%	28%	30%	18%
Life Sciences	30%	19%	41%	36%	34%	30%	49%	100%	34%	41%	30%	18%
I.T. (Information Technology)	29%	31%	27%	34%	39%	39%	43%	34%	100%	25%	30%	35%
Telecomm	11%	10%	13%	21%	19%	26%	34%	26%	33%	12%	15%	8%
Other (specify)	45%	43%	48%	29%	34%	27%	28%	34%	43%	42%	52%	42%
Q6. Is your company developing:												
an innovative physical product	21%	18%	26%	29%	16%	17%	19%	27%	7%	30%	20%	11%
an innovative service	27%	30%	24%	16%	26%	21%	25%	23%	34%	20%	27%	37%
a combination	42%	42%	40%	41%	40%	47%	42%	40%	44%	36%	42%	46%
innovating in some other way	9%	10%	8%	14%	18%	13%	13%	8%	13%	10%	11%	6%
Not sure / Prefer not to say	1%	1%	2%	0%	0%	1%	2%	2%	2%	3%	0%	0%

***Statistically Significant**



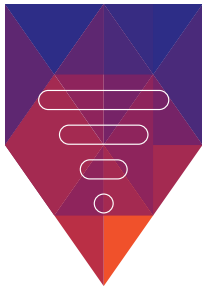
Overall Alberta Tech Sector Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q7. Which of the following apply in describing your company / company's offering?												
A.I. / machine learning	34%	36%	33%	40%	31%	44%	42%	34%	59%	14%	38%	49%
Blockchain	7%	9%	5%	12%	10%	11%	8%	6%	10%	6%	5%	11%
Fintech	6%	10%	1%	5%	8%	4%	6%	5%	8%	6%	2%	12%
Social platform	44%	52%	33%	43%	52%	47%	34%	35%	62%	35%	47%	51%
Equipment and / or Instruments	23%	23%	20%	36%	23%	34%	36%	24%	18%	20%	30%	18%
SaaS / Enterprise Software (to replace business productivity)	48%	54%	40%	45%	44%	59%	57%	45%	82%	45%	45%	52%
Medical Devices	13%	5%	20%	3%	15%	4%	9%	32%	5%	16%	11%	11%
BioTech	9%	4%	15%	5%	8%	1%	8%	27%	7%	16%	6%	6%
Other (specify)	25%	22%	28%	33%	19%	24%	28%	29%	15%	25%	27%	23%
Q8. Where is your company headquartered?												
Calgary Region	55%	100%	0%	53%	55%	60%	43%	35%	59%	49%	58%	63%
Edmonton Region	41%	0%	100%	45%	40%	37%	53%	56%	38%	49%	41%	32%
Red Deer	1%	0%	0%	0%	2%	1%	0%	2%	2%	0%	2%	0%
Lethbridge	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Medicine Hat	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Grande Prairie	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Fort McMurray	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other (specify)	2%	0%	0%	2%	3%	1%	4%	6%	2%	1%	0%	5%



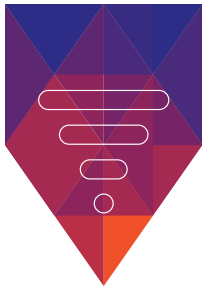
Company Data

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q9. How many full-time employees are in your company?												
1 to 4	40%	37%	44%	43%	42%	36%	30%	39%	30%	26%	32%	63%
5 to 9	22%	23%	19%	26%	23%	23%	25%	23%	20%	12%	35%	18%
10 to 24	23%	23%	23%	24%	26%	26%	25%	26%	34%	30%	26%	14%
25 to 49	6%	6%	6%	2%	3%	4%	6%	3%	8%	13%	0%	3%
50 to 99	3%	4%	1%	0%	2%	4%	6%	2%	3%	4%	5%	0%
100 to 199	3%	3%	3%	2%	2%	3%	2%	5%	3%	10%	0%	0%
200 to 499	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
500+	1%	1%	2%	0%	0%	1%	4%	3%	2%	4%	0%	0%
Not sure / Prefer not to say	2%	3%	1%	3%	3%	3%	4%	0%	0%	0%	3%	2%
Q10. Approximately what percent of your employees are male and what percent are female?												
Male 0 to 10 percent	3%	5%	1%	0%	2%	2%	0%	0%	2%	3%	3%	3%
Male 11 to 20 percent	2%	2%	1%	0%	2%	2%	2%	2%	0%	2%	2%	2%
Male 21 to 30 percent	1%	0%	1%	0%	0%	0%	2%	2%	0%	2%	0%	0%
Male 31 to 40 percent	4%	3%	5%	4%	3%	2%	2%	2%	6%	5%	5%	2%
Male 41 to 50 percent	15%	16%	14%	12%	16%	12%	10%	18%	19%	17%	13%	14%
Male 51 to 60 percent	10%	10%	8%	10%	10%	8%	12%	16%	15%	13%	8%	7%
Male 61 to 70 percent	18%	18%	18%	18%	7%	20%	24%	15%	13%	19%	21%	14%
Male 71 to 80 percent	15%	13%	19%	18%	17%	15%	21%	24%	13%	14%	18%	14%
Male 81 to 90 percent	11%	14%	8%	18%	14%	22%	12%	2%	15%	11%	15%	9%
Male 91 to 100 percent	22%	20%	24%	22%	29%	17%	14%	20%	19%	14%	16%	36%
Male Mean:	70.4	69.2	71.9	75.5	74.2	73.2	70.6	69.6	69.9	66.6	69.7	75.5



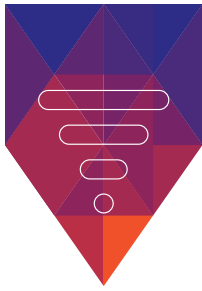
Company Data Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q11. What are the biggest immediate challenges your company is facing?												
HR – Sales team	24%	24%	26%	26%	19%	26%	30%	26%	34%	26%	32%	15%
HR – Management team	14%	17%	12%	7%	10%	11%	13%	19%	23%	19%	12%	9%
HR – Technical team	33%	39%	24%	31%	32%	36%	36%	26%	36%	32%	35%	35%
Access to capital / funding	63%	66%	58%	66%	76%	61%	60%	68%	70%	55%	64%	69%
Achieving product	22%	21%	23%	24%	16%	21%	28%	19%	21%	13%	24%	29%
Market access	42%	43%	41%	41%	44%	40%	42%	48%	44%	43%	44%	43%
Other (specify)	11%	6%	15%	12%	10%	10%	11%	15%	16%	9%	12%	6%
Q12. Would you classify your company as a start-up?												
Yes	68%	68%	67%	69%	71%	63%	66%	66%	72%	36%	73%	95%
No	28%	30%	28%	28%	27%	33%	30%	31%	25%	62%	20%	3%
Not sure / Prefer not to say	4%	3%	5%	3%	2%	4%	4%	3%	3%	1%	8%	2%
Q13. Was your company originally a spinoff from academic research?												
Yes	19%	12%	28%	16%	8%	13%	15%	37%	13%	19%	23%	14%
No	80%	86%	71%	84%	89%	86%	85%	61%	87%	81%	73%	86%
Not sure / Prefer not to say	1%	2%	1%	0%	3%	1%	0%	2%	0%	0%	5%	0%
Q14. Are you building your product on your own or outsourcing?												
Building our own product in-house	50%	49%	53%	47%	45%	61%	58%	47%	59%	54%	50%	45%
Outsourcing	6%	6%	6%	7%	11%	6%	6%	6%	3%	3%	8%	9%
A mix of both	43%	45%	38%	47%	44%	33%	36%	47%	36%	41%	42%	46%
Not sure / Prefer not to say	1%	0%	2%	0%	0%	0%	0%	0%	2%	3%	0%	0%



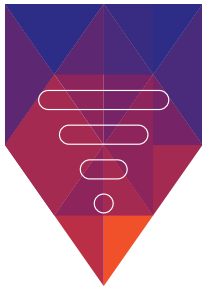
Company Data Continued

Total count (n):	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
	208	115	86	58	62	70	53	62	61	69	66	65
Q15. What was your company's annual revenue in the most recent fiscal year?												
Pre-revenue	24%	23%	24%	28%	26%	20%	19%	26%	18%	4%	21%	48%
<\$100K	19%	21%	16%	16%	24%	21%	19%	18%	18%	13%	15%	29%
\$100K to \$500K	16%	14%	20%	21%	16%	13%	15%	19%	16%	16%	24%	9%
\$500K to \$1 million	12%	15%	7%	16%	10%	17%	19%	13%	13%	4%	23%	8%
\$1 million to \$5 million	15%	17%	15%	17%	19%	17%	17%	13%	23%	33%	9%	3%
Greater than \$5 million	8%	9%	6%	2%	3%	9%	9%	8%	7%	19%	5%	0%
Not sure / Prefer not to say	6%	3%	12%	2%	2%	3%	2%	3%	5%	10%	3%	3%
Q25. Has your company ever participated in an accelerator program?												
Yes	28%	30%	26%	29%	32%	29%	28%	32%	38%	17%	45%	25%
No	67%	64%	69%	69%	61%	66%	66%	61%	61%	74%	55%	71%
Not sure / Prefer not to say	5%	5%	6%	2%	6%	6%	6%	6%	2%	9%	0%	5%
Q26. Which of the following best represents the stage of your company's main product offering?												
Idea	2%	2%	1%	5%	2%	3%	4%	3%	2%	0%	0%	6%
Prototype developed	13%	12%	14%	12%	16%	11%	15%	10%	8%	4%	12%	23%
Commercial product development	17%	16%	21%	22%	19%	13%	11%	21%	11%	9%	24%	20%
Product launched	18%	17%	19%	24%	19%	23%	19%	19%	20%	14%	15%	25%
Product traction achieved and scaling	45%	52%	36%	31%	39%	47%	47%	42%	59%	62%	48%	25%
Other (specify)	5%	1%	9%	5%	5%	3%	4%	5%	0%	10%	0%	2%



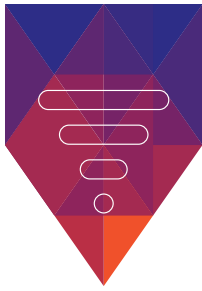
Company Data Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q27. How many founders started your company?												
One	29%	22%	38%	28%	37%	23%	30%	31%	26%	30%	29%	29%
Two	39%	43%	36%	47%	45%	41%	28%	39%	44%	36%	36%	45%
Three	18%	23%	10%	16%	13%	19%	25%	18%	18%	14%	23%	20%
Four	5%	4%	6%	2%	2%	4%	4%	5%	3%	4%	5%	6%
Five or more	6%	7%	5%	5%	2%	7%	6%	5%	3%	9%	8%	0%
Not sure / Prefer not to say	3%	1%	5%	3%	2%	6%	8%	3%	5%	6%	0%	0%
Q28. In what year was your company founded?												
1999 or earlier	7%	6%	7%	5%	5%	10%	9%	6%	5%	20%	0%	0%
2000	1%	3%	0%	2%	3%	1%	2%	2%	2%	4%	0%	0%
2001	1%	2%	0%	0%	2%	1%	2%	0%	3%	3%	0%	0%
2002	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2003	1%	1%	2%	0%	0%	0%	0%	3%	0%	4%	0%	0%
2004	1%	1%	1%	2%	0%	1%	0%	0%	2%	3%	0%	0%
2005	2%	1%	5%	5%	3%	3%	4%	5%	3%	7%	0%	0%
2006	3%	3%	3%	3%	3%	3%	4%	6%	3%	9%	0%	0%
2007	1%	0%	3%	3%	2%	0%	4%	2%	0%	4%	0%	0%
2008	3%	3%	5%	2%	3%	1%	4%	8%	3%	10%	0%	0%
2009	4%	3%	6%	5%	5%	6%	4%	5%	2%	13%	0%	0%
2010	4%	3%	6%	2%	2%	0%	0%	6%	3%	13%	0%	0%
2011	3%	4%	1%	0%	2%	3%	4%	2%	2%	9%	0%	0%
2012	6%	5%	8%	10%	3%	10%	9%	11%	8%	0%	20%	0%
2013	4%	3%	5%	5%	5%	6%	8%	3%	5%	0%	12%	0%
2014	12%	10%	14%	14%	18%	9%	11%	10%	8%	0%	36%	0%
2015	10%	15%	5%	9%	11%	11%	9%	8%	11%	0%	32%	0%
2016	13%	16%	12%	12%	13%	11%	11%	5%	20%	0%	0%	43%
2017	11%	10%	8%	10%	18%	10%	8%	11%	11%	0%	0%	34%
2018	7%	10%	5%	7%	3%	7%	4%	3%	7%	0%	0%	23%
Not sure / Prefer not to say	4%	2%	5%	3%	0%	6%	4%	3%	2%	0%	0%	0%



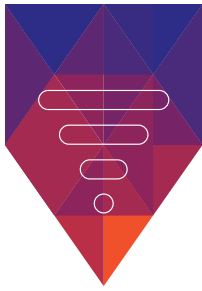
Fundraising

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 –2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q16. Is your company currently seeking funding?												
Yes	70%	73%	65%	78%	77%	69%	68%	74%	75%	62%	70%	78%
No	24%	25%	22%	21%	16%	29%	26%	23%	20%	32%	23%	17%
Not sure / Prefer not to say	7%	2%	13%	2%	6%	3%	6%	3%	5%	6%	8%	5%
Q17. How much funding has your company received to date?												
None	18%	17%	19%	19%	23%	23%	23%	21%	23%	20%	12%	20%
Less than \$100K	13%	11%	16%	16%	13%	13%	9%	15%	13%	4%	11%	28%
\$100,000 to \$499,999	15%	17%	15%	21%	19%	14%	11%	10%	15%	9%	18%	22%
\$500,000 to \$999,999	11%	14%	6%	9%	18%	9%	8%	10%	5%	9%	17%	8%
\$1 million to \$4.9 million	25%	25%	27%	22%	19%	20%	30%	24%	31%	26%	35%	15%
\$5 million +	12%	12%	12%	5%	3%	11%	8%	15%	5%	28%	5%	3%
Not sure / Prefer not to say	5%	4%	6%	9%	5%	10%	11%	6%	8%	4%	3%	5%
Q18. Which of the following has provided funding to your company?												
Personal savings	75%	73%	78%	83%	79%	77%	79%	71%	77%	67%	82%	78%
Angel Investors / Family Offices	43%	43%	43%	36%	37%	34%	40%	44%	43%	48%	45%	37%
Venture Capital Investors	18%	17%	20%	12%	16%	20%	26%	15%	25%	26%	20%	9%
Friends and Family	48%	50%	48%	43%	44%	41%	51%	47%	49%	55%	55%	35%
Crowdfunding	5%	4%	6%	3%	8%	1%	6%	5%	7%	7%	5%	3%
Government Grants / Credits	56%	54%	62%	59%	55%	56%	53%	58%	57%	57%	68%	46%
Banks	23%	25%	22%	22%	29%	23%	23%	24%	23%	32%	29%	11%
Other (specify)	18%	22%	12%	26%	18%	27%	17%	24%	15%	20%	17%	15%
Not sure / Prefer not to say	3%	2%	5%	2%	5%	3%	4%	3%	3%	6%	0%	3%



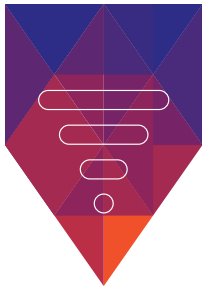
Fundraising Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q19. How much funding was raised in your company's most recent round of fundraising?												
None	18%	18%	19%	26%	23%	24%	26%	27%	25%	20%	15%	18%
Less than \$100K	17%	13%	21%	12%	21%	14%	11%	16%	16%	7%	14%	32%
\$100,000 to \$249,999	11%	11%	9%	16%	11%	13%	8%	6%	13%	10%	11%	11%
\$250,000 to \$499,999	11%	11%	10%	14%	10%	9%	8%	6%	3%	7%	17%	8%
\$500,000 to \$999,999	11%	10%	12%	12%	13%	11%	17%	15%	8%	9%	20%	6%
\$1 million to \$4.9 million	17%	21%	13%	9%	11%	13%	13%	13%	21%	25%	12%	15%
\$5 million +	6%	6%	6%	2%	0%	4%	4%	6%	2%	14%	3%	0%
Not sure / Prefer not to say	10%	9%	10%	10%	11%	11%	13%	10%	11%	7%	9%	9%
Q20. From what type of financing options did this fundraising come from?												
Equity	50%	52%	45%	47%	35%	49%	43%	44%	43%	55%	47%	48%
Debt	22%	20%	26%	26%	19%	20%	19%	29%	21%	28%	21%	18%
Grants	25%	25%	27%	26%	19%	24%	17%	24%	28%	23%	24%	29%
Hybrids	16%	16%	17%	19%	16%	20%	21%	15%	18%	14%	17%	14%
Not sure / Prefer not to say	18%	19%	17%	19%	26%	21%	26%	23%	21%	17%	15%	20%
Q21. How long did it take you to close your most recent round of fundraising?												
Less than 3 months	28%	26%	30%	29%	29%	31%	23%	19%	20%	26%	23%	34%
4 to 6 months	25%	27%	22%	19%	24%	19%	23%	23%	31%	16%	33%	28%
6 to 12 months	14%	17%	12%	10%	16%	13%	8%	13%	8%	19%	15%	9%
More than 12 months	8%	7%	9%	12%	5%	7%	15%	13%	11%	13%	6%	6%
Not sure / Prefer not to say	25%	23%	27%	29%	26%	30%	32%	32%	30%	26%	23%	23%



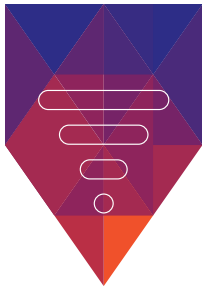
Fundraising Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 –2015	2016–
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q22. How much funding does your company intend to raise in your next round of fundraising?												
None	8%	8%	8%	9%	3%	9%	13%	13%	8%	16%	5%	2%
Less than \$100K	3%	2%	6%	0%	2%	1%	2%	2%	2%	3%	3%	5%
\$100,000 to \$249,999	7%	9%	5%	5%	18%	6%	6%	5%	3%	0%	6%	15%
\$250,000 to \$499,999	10%	11%	8%	12%	15%	10%	6%	13%	8%	7%	9%	14%
\$500,000 to \$999,999	12%	15%	8%	14%	8%	11%	9%	5%	11%	6%	12%	17%
\$1 million to \$4.9 million	30%	28%	33%	33%	29%	30%	36%	37%	41%	26%	39%	28%
\$5 million +	16%	17%	16%	14%	10%	17%	15%	16%	13%	28%	11%	9%
Not sure / Prefer not to say	14%	11%	16%	14%	16%	16%	13%	10%	13%	14%	15%	11%
Q23. Where have your funders been located?												
In the Calgary region	50%	76%	19%	50%	45%	53%	40%	37%	44%	43%	55%	57%
In the Edmonton region	31%	10%	59%	31%	29%	24%	32%	45%	26%	33%	32%	29%
In another part of Alberta	13%	12%	15%	14%	11%	16%	19%	21%	11%	19%	12%	11%
In another part of Canada	27%	30%	24%	26%	29%	23%	25%	24%	30%	32%	30%	23%
In the USA	24%	26%	20%	19%	18%	26%	28%	19%	21%	26%	24%	22%
In Europe	7%	6%	6%	10%	5%	10%	8%	6%	7%	9%	8%	5%
In Asia	6%	3%	9%	3%	3%	3%	6%	10%	5%	9%	6%	3%
In another part of the world	5%	7%	3%	5%	3%	4%	6%	2%	8%	7%	3%	6%
Not sure / Prefer not to say	15%	12%	16%	14%	16%	19%	17%	16%	20%	14%	11%	14%



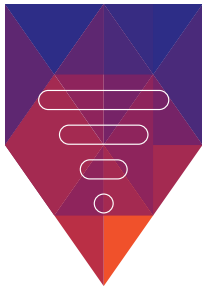
Fundraising Continued

	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65
Q24. What was the last round of funding your company has raised? NB: The US dollar ranges are approximations only. Please pick which one best fits your company.												
Pre-seed (up to US\$750K)	29%	30%	29%	33%	37%	27%	30%	29%	33%	14%	36%	40%
Seed (US\$500K - \$4M)	25%	26%	24%	22%	27%	21%	28%	19%	28%	25%	29%	23%
Series A (US\$2M+)	7%	9%	5%	2%	2%	1%	0%	10%	5%	14%	6%	0%
Series B	0%	0%	1%	0%	0%	0%	0%	2%	0%	1%	0%	0%
Series C	0%	0%	1%	2%	0%	1%	2%	0%	0%	1%	0%	0%
Beyond Series C	2%	3%	0%	2%	0%	4%	0%	0%	2%	4%	0%	0%
Not applicable	27%	24%	29%	28%	27%	27%	25%	31%	28%	29%	21%	31%
Not sure / Prefer not to say	9%	9%	10%	12%	6%	17%	15%	10%	5%	10%	8%	6%



The People

Total count (n):	Total	Location		Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--
	208	115	86	58	62	70	53	62	61	69	66	65
Q9. How many full-time employees are in your company?												
1 to 4	40%	37%	44%	43%	42%	36%	30%	39%	30%	26%	32%	63%
5 to 9	22%	23%	19%	26%	23%	23%	25%	23%	20%	12%	35%	18%
10 to 24	23%	23%	23%	24%	26%	26%	25%	26%	34%	30%	26%	14%
25 to 49	6%	6%	6%	2%	3%	4%	6%	3%	8%	13%	0%	3%
50 to 99	3%	4%	1%	0%	2%	4%	6%	2%	3%	4%	5%	0%
100 to 199	3%	3%	3%	2%	2%	3%	2%	5%	3%	10%	0%	0%
200 to 499	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
500+	1%	1%	2%	0%	0%	1%	4%	3%	2%	4%	0%	0%
Not sure / Prefer not to say	2%	3%	1%	3%	3%	3%	4%	0%	0%	0%	3%	2%
Q10. Approximately what percent of your employees are male and what per cent are female?												
Male 0 to 10 percent	3%	5%	1%	0%	2%	2%	0%	0%	2%	3%	3%	3%
Male 11 to 20 percent	2%	2%	1%	0%	2%	2%	2%	2%	0%	2%	2%	2%
Male 21 to 30 percent	1%	0%	1%	0%	0%	0%	2%	2%	0%	2%	0%	0%
Male 31 to 40 percent	4%	3%	5%	4%	3%	2%	2%	2%	6%	5%	5%	2%
Male 41 to 50 percent	15%	16%	14%	12%	16%	12%	10%	18%	19%	17%	13%	14%
Male 51 to 60 percent	10%	10%	8%	10%	10%	8%	12%	16%	15%	13%	8%	7%
Male 61 to 70 percent	18%	18%	18%	18%	7%	20%	24%	15%	13%	19%	21%	14%
Male 71 to 80 percent	15%	13%	19%	18%	17%	15%	21%	24%	13%	14%	18%	14%
Male 81 to 90 percent	11%	14%	8%	18%	14%	22%	12%	2%	15%	11%	15%	9%
Male 91 to 100 percent	22%	20%	24%	22%	29%	17%	14%	20%	19%	14%	16%	36%
Male Mean:	70.4	69.2	71.9	75.5	74.2	73.2	70.6	69.6	69.9	66.6	69.7	75.5



The People Continued

	Total	Location			Industry						Year Founded		
		Cal.	Edm.	Clean	Consumer	Energy	Ind/ Mat	Life Sci	I.T.	2011	2012 -2015	2016--	
Total count (n):	208	115	86	58	62	70	53	62	61	69	66	65	
Q27. How many founders started your company?													
One	29%	22%	38%	28%	37%	23%	30%	31%	26%	30%	29%	29%	
Two	39%	43%	36%	47%	45%	41%	28%	39%	44%	36%	36%	45%	
Three	18%	23%	10%	16%	13%	19%	25%	18%	18%	14%	23%	20%	
Four	5%	4%	6%	2%	2%	4%	4%	5%	3%	4%	5%	6%	
Five or more	6%	7%	5%	5%	2%	7%	6%	5%	3%	9%	8%	0%	
Not sure / Prefer not to say	3%	1%	5%	3%	2%	6%	8%	3%	5%	6%	0%	0%	
Q29A. Does your company have at least one founder that... Is female													
Yes	30%	35%	24%	22%	35%	24%	26%	35%	31%	28%	33%	32%	
No	67%	65%	67%	72%	63%	69%	66%	60%	64%	68%	65%	68%	
Not sure	3%	0%	8%	5%	2%	7%	8%	5%	5%	4%	2%	0%	
Q29B. Does your company have at least one founder that... Has a technical background in your industry													
Yes	84%	84%	85%	86%	84%	84%	83%	85%	89%	81%	86%	85%	
No	14%	14%	13%	14%	15%	14%	15%	13%	8%	13%	14%	15%	
Not sure	2%	2%	2%	0%	2%	1%	2%	2%	3%	6%	0%	0%	
Q29C. Does your company have at least one founder that... Has previous experience in a start-up													
Yes	71%	69%	72%	74%	76%	76%	75%	73%	84%	61%	74%	75%	
No	25%	30%	22%	24%	23%	20%	19%	24%	11%	30%	26%	23%	
Not sure	4%	2%	6%	2%	2%	4%	6%	3%	5%	9%	0%	2%	
Q30. What is the current average age of your company's founders?													
20 to 30 years	9%	10%	9%	3%	15%	4%	4%	3%	11%	1%	5%	23%	
31 to 40 years	26%	27%	28%	28%	29%	24%	17%	19%	33%	16%	35%	31%	
41 to 50 years	30%	37%	21%	28%	26%	30%	32%	29%	28%	28%	30%	34%	
51 to 60 years	12%	10%	14%	17%	11%	16%	17%	21%	10%	16%	15%	5%	
61 to 70 years	3%	3%	2%	2%	3%	3%	2%	5%	2%	6%	0%	3%	
Not sure	19%	15%	26%	22%	16%	23%	28%	23%	16%	33%	15%	5%	
Mean:	42.8	42.2	42.6	43.8	41.2	44.1	45.8	46.8	40.7	47.9	42.4	39	



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